

**Curriculum Vitae****Junguk Hur, Ph.D.****Current Position**

Associate Professor  
 Department of Biomedical Sciences  
 School of Medicine and Health Sciences  
 University of North Dakota  
 1301 N. Columbia Rd. Stop 9037  
 Grand Forks, ND 58202-9037  
[junguk.hur@med.und.edu](mailto:junguk.hur@med.und.edu)  
 (Office) 701-777-6814  
 (Fax) 701-777-2477  
<http://hurlab.med.und.edu>  
<https://med.und.edu/labs/hur/>

**Education**

Ph.D.: Bioinformatics, University of Michigan  
 Ann Arbor, Michigan, 2006~2010  
 M.S.: Bioinformatics, Indiana University  
 Bloomington, Indiana, 2004~2006  
 B.S.: Life Science, Pohang University of Science and Technology (POSTECH)  
 Pohang, Korea, 1994~2001  
 Post-doc: Bioinformatics, University of Michigan  
 Ann Arbor, Michigan, 2010~2015  
 Systems pharmacology, US Food and Drug Administration (FDA)  
 Silver Spring, Maryland, 2013

**Research interests**

Bioinformatics and systems biology  
 Ontology-based literature mining  
 Artificial intelligence and machine learning in biomedical research  
 Neurological disorders including diabetic neuropathy and ALS

**Professional Experience**Academic appointments

Jan. 2015 ~ Jun. 2021 Assistant Professor, University of North Dakota  
 Mar. 2018 ~ Adjunct Research Assistant Professor, University of Michigan, Ann Arbor  
 Jul. 2021 ~ Associate Professor, University of North Dakota

Hospital, government, or other professional positions

Jan. 1995 to Apr. 1995 Lab Participation at National Center for Calcium & Learning. POSTECH, Korea  
 Apr. 1998 to Jun. 2000 Military service, Korea  
 Feb. 2001 to Oct. 2002 Research Scientist, Bioinformatics team, ISTECH Inc., Korea  
 Jun. 2003 to Jun. 2004 Part-time Research Scientist, Bioinformatics team, ISTECH Inc., Korea  
 Feb. 2013 to Apr. 2013 ORISE Visiting Research Fellow, US Food and Drug Administration (FDA)  
 Silver Spring, Maryland  
 Apr. 2017 ~ Research Without Compensation (WOC),  
 U.S. Department of Veterans Affairs, Fargo Hospital  
 Aug. 2021 ~ Director, UND Computational Data Analysis Core (CDAC)  
 Aug. 2024 ~ Lead, UND Research Design, Compliance, and Data Management Core (RDCD)

### **Honors and Awards**

2006-2007	Rackham Graduate Fellowship University of Michigan, Ann Arbor, Michigan
2007-2009	Program for Neurology Research and Discovery Scholarship University of Michigan, Ann Arbor, Michigan
2009-2010	Rackham Pre-Doctoral Fellowship University of Michigan, Ann Arbor, Michigan
2010	Rackham Spotlight University of Michigan, Ann Arbor, Michigan
2011-2014	Juvenile Diabetes Research Foundation Post-doctoral Fellowship Recipient

### **Membership in professional organizations**

May. 2008 ~	International Society for Computational Biology, member
Mar. 2015 ~ Dec. 2021	American Diabetes Association, professional member
Feb. 2016 ~ Dec. 2021	American Society for Pharmacology and Experimental Therapeutics, member
Apr. 2017 ~ Dec. 2021	North Dakota Academy of Sciences, member
Mar. 2024 ~	American Medical Informatics Association, member

### **Major committee and service responsibilities**

#### School of Medicine & Health Sciences

Aug. 2016 to Aug. 2019	Admissions Committee (member)
Sep. 2019 to Jul. 2020	Admissions Committee (vice chair)
Feb. 2020	Grievance Committee (member)
Aug. 2020 to Jul. 2021	Admissions Committee (chair)
Aug. 2021 to Jun. 2023	Admissions Committee (member)
Aug. 2023 to Jun. 2024	Admissions Committee (vice chair)
Jan. 2022 to Apr. 2022	UND LCME Accreditation – Junior Faculty Member
Aug. 2024 to Jun. 2025	Admissions Committee (member)

#### Departmental

Aug. 2015 ~ Dec. 2017	Departmental Website Committee
Aug. 2015 ~	Epigenetics Bioinformatics (Genomics) Core (advisory board member)
Aug. 2021 ~	UND SMHS Histology Core (internal advisory committee member)
Sep. 2024 ~	UND Computational Biology Search Committee (member)
Jan. 2025	UND SMHS Geriatrics CPT Committee (member)

### **Inventions, intellectual property, and patents held**

Patent: A System for Analyzing DNA-Chips Using Gene Ontology, and a Method Thereof, 2002, Korea

### **Review and Referee Work**

#### Editorial Board

Aug. 2015 ~	Review Editor, Frontiers in Cellular and Infection Microbiology
Feb. 2018 ~	Associate Editor BMC Complementary Medicine and Therapies
May. 2019 ~	Associate Editor, Scientific Reports
Jul. 2020 ~ Dec. 2024	Topic Board Editor, International Journal of Molecular Sciences
Jun. 2023 ~	Guest Editor, Journal of Biomedical Semantics
May. 2024 ~	Guest Editor, Journal of Computational Biology
Sep. 2024 ~	Guest Editor, Frontiers in Immunology, Vaccine and Infectious Disease Informatics Special Issue

Ad-hoc reviewer for journals

Acta Psychiatrica Scandinavica; Advances and Applications in Bioinformatics and Chemistry; Annals of the New York Academy of Sciences; Bioinformatics; BioMed Research International; Biomolecules; BMC Bioinformatics; BMC Complementary and Alternative Medicine; BMC Endocrine; BMC Neurology; Cells; Chemico-Biological Interactions; Chemistry and Biodiversity; Computational Biology and Chemistry; Computer Methods and Programs in Biomedicine; Current Diabetes Reviews; Diabetes Therapy; Diabetes, Metabolic Syndrome, and Obesity; Drug Discovery Today; European Journal of Pharmacology; Evidence-Based Complementary and Alternative Medicine; Frontiers in Cellular and Infection Microbiology; Frontiers in Microbiology; Frontiers in Neuroinformatics; Frontiers in Pharmacology; Genomics, Proteomics, and Bioinformatics; Gerontology; International ImmunoPharmacology; International Journal of Genomics; International Journal of Medical Sciences; iScience; Journal of Affective Disorders; Journal of Diabetes and Complications; Journal of Diabetes Research; Journal of Educational Evaluation for Health Professions; Journal of Functional Food; Journal of Microbiology; Journal of Molecular Endocrinology; Journal of Pain Research; Journal of Pharmaceutical and Biomedical Analysis; Pharmacogenomics; Processes; Research Square ; Scientific Reports; Therapeutic Advances in Chronic Disease; Scientific Data; Gene; Science of the Total Environment; Journal of Alzheimer's Disease; Heliyon; Applied Ontology; Drug Safety; Annals of Neurology; Journal of Biomedical Semantics; Journal of Computational Biology

Ad-hoc reviewer for conference proceedings

Sep. 2014	2014 Conference of Technologies and Applications of Artificial Intelligence
Jul. 2019	The 3 <sup>rd</sup> International Conference on Biological Information and Biomedical Engineering
Jun. 2022	The 13 <sup>th</sup> International Conference on Biomedical Ontology (ICBO-2022)
Dec. 2022	The 14 <sup>th</sup> International Conference on Bioinformatics Models, Methods and Algorithms
Dec. 2023	The 15 <sup>th</sup> International Conference on Bioinformatics Models, Methods and Algorithms
May 2024	American Medical Informatics Association (AMIA) 2024 Annual Symposium
May 2024	The 15 <sup>th</sup> International Conference on Biomedical Ontology (ICBO-2024)
Oct. 2024	American Medical Informatics Association (AMIA) 2025 Informatics Summit
Nov. 2024	The 16 <sup>th</sup> International Conference on Bioinformatics Models, Methods and Algorithms

Ad-hoc reviewer for grants

Jul. 2016	Diabetic Complications Consortium pilot grant
Jul. 2016	Department of Defense (DoD) Peer Reviewed Medical Research Program (PRMRP)
Nov. 2016	Early Career Reviewer (ECR) program at the Center for Scientific Review (CSR)
Oct. 2017	National Science Foundation (NSF) reviewer
Dec. 2017	DoD PRMRP Full application reviewer
Aug. 2018	DoD PRMRP Pre-application reviewer
Oct. 2018	National Institute of Health (NIH) CNNT Study Section reviewer
Mar. 2019	DoD PRMRP preliminary reviewer
May. 2020	DoD PRMRP preliminary reviewer
Jul. 2021	DoD PRMRP panel reviewer
Jul. 2021	UK Research and Innovation (UKRI) <i>ad hoc</i> reviewer
May. 2022	UND BIMD518 Spring 2022. Student grant review
Dec. 2022	Motor Neuron Disease Association <i>ad hoc</i> reviewer
Dec. 2022	UND BIMD518 Fall 2022. Student grant review

Mar. 2023 National Institute of Health (NIH)  
 PAR Panel: Biomedical Data Repositories and Knowledgebases  
 Jun. 2023 National Institute of Health (NIH)  
 PAR Panel: Biomedical Data Repositories and Knowledgebases  
 Dec. 2023 UND BIMD518 Fall 2023. Student grant review  
 Mar. 2024 National Institute of Health (NIH)  
 PAR Panel: Biomedical Data Repositories and Knowledgebases  
 Jun. 2024 National Institute of Health (NIH)  
 PAR Panel: Biomedical Data Repositories and Knowledgebases  
 Oct. 2024 National Institute of Health (NIH)  
 PAR Panel: P30 Cystic Fibrosis Research and Translation Centers  
 Feb. 2025 National Institute of Health (NIH)  
 PAR Panel: Biomedical Data Repositories and Knowledgebases  
 Jun. 2025 National Institute of Health (NIH)  
 PAR Panel: Biomedical Data Repositories and Knowledgebases

Ad-hoc faculty review

May 2023 Tenure application (Assistant to Associate)  
 Arab American University  
 Jul. 2024 Promotion application (Associate to Full Research Scientist)  
 University of Michigan

**Teaching Activities**

Courses

Sep. 2004 ~ Dec. 2004 INFO692, Graduate Capstone Project for Bioinformatics  
 (Associate Instructor, Indiana University)  
 Jan. 2005 ~ Apr. 2005 INFO590, Introduction to genomics for non-biology students  
 (Associate Instructor, Indiana University)  
 Sep. 2005 ~ Dec. 2005 BIOL519, Bioinformatics Theory and Application  
 (Associate Instructor, Indiana University)  
 Jan. 2008 ~ Apr. 2008 BIOINFO 800.006-008, Introduction to Bioinformatics  
 (Graduate Student Instructor, University of Michigan)  
 Aug. 2016 ~ Dec. 2016 BMB540 Special Topics: Foundations of Bioinformatics for Biology and  
 Biomedical Graduate Students (2 credits; UND)  
 Aug. 2017 ~ Dec. 2017 BIMD514 Bioinformatics (3 credits; UND)  
 Jan. 2018 ~ May 2018 BIMD494 Directed Studies – Bioinformatics (1 credit; UND)  
 Aug. 2019 ~ Dec. 2019 BIMD514 Bioinformatics (3 credits; UND)  
 Aug. 2020 ~ Dec. 2020 BIMD514 Bioinformatics (3 credits; UND)  
 Aug. 2021 ~ Dec. 2021 BIMD514 Bioinformatics (3 credits; UND)  
 Aug. 2022 ~ Dec. 2022 BIMD514 Bioinformatics (3 credits; UND)  
 Aug. 2023 ~ Dec. 2023 BIMD514 Bioinformatics (3 credits; UND)  
 Mar. 2024 BIMD502 Module 4 (1 lecture; UND)  
 Aug. 2024 ~ Dec. 2024 BIMD514 Bioinformatics (3 credits; UND)  
 Mar. 2025 BIMD502 Module 4 (1 lecture; UND)

Patient-Centered Learning (PCL) Facilitation (UND)

Jan. 2018 ~ Mar. 2018 PCL Block 3 Facilitation – Class of 2021 (M.D.)  
 Jan. 2019 ~ Mar. 2019 PCL Block 3 Facilitation – Class of 2022 (M.D.)  
 Jan. 2020 ~ Mar. 2020 PCL Block 3 Facilitation – Class of 2023 (M.D.)  
 Oct. 2020 ~ Dec. 2020 PCL Unified Session Block 3 Facilitation – Class of 2024 (M.D.)  
 Nov. 2021 ~ Jan. 2022 PCL PreUnit 3 Facilitation – Class of 2025 (M.D.)

Nov. 2022 ~ Jan. 2023 PCL Unit 3 Facilitation – Class of 2026 (M.D.)  
 Sep. 2023 ~ Nov. 2023 PCL Unit 2 Facilitation – Class of 2027 (M.D.)  
 Sep. 2024 ~ Nov. 2024 PCL Unit 2 Facilitation – Class of 2028 (M.D.)

Advising – Post-doctoral fellows (UND)

Nov. 2016 ~ Jul. 2022 Dr. Kai Guo (joint with UM Dr. Eva Feldman)  
 Nov. 2016 ~ Dec. 2017 Dr. Guillermo de Anda Jauregui  
 Aug. 2018 ~ Aug. 2022 Dr. Atrayee Ray (co-mentored with Drs. Dhasarathy and Brissette)  
 Sep. 2019 ~ Feb. 2022 Dr. Brett McGregor  
 Mar. 2020 ~ Jul. 2023 Dr. MD Obayed Raihan (co-mentored with Dr. Porter)

Advising – Visiting scholar (UND)

Nov. 2019 ~ Aug. 2021 Dr. Ling Li (Guangzhou First People's Hospital, China; joint with Dr. Xusheng Wang at UND Biology)  
 Sep. 2022 ~ Dec. 2022 Ms. Hasin Rehana (University of Dhaka)  
 Sep. 2022 ~ Ms. Christianah Jemiyo (National Assembly Budget & Research Office (NABRO), Nigeria)  
 Sep. 2023 ~ Dr. Kai Guo (Research Assistant Professor at UM)  
 Dec. 2023 ~ Ms. Fang Huang (Chongqing Medical University, Ph.D. Student)

Advising – Students

Oct. 2010 ~ Jan. 2013 George Zhao (mentor for M.S.), University of Michigan (UM)  
 May. 2015 ~ May 2019 Brett A. McGregor (co-chair of FAC), UND Biomedical Sciences Ph.D.  
 Nov. 2015 ~ Jul. 2019 Peter Halcrow (member of Ph.D. FAC), UND Biomedical Sciences Ph.D.  
 Oct. 2015 ~ May 2016 Dakota Krout (advisor), UND Computer Sciences undergraduate  
 May 2016 ~ May 2018 Larson Danes (advisor for co-op), UND Computer Sciences undergraduate  
 Jun. 2016 ~ Jul. 2020 Derick Thompson (member of FAC), UND Biomedical Sciences Ph.D.  
 Jun. 2017 ~ May 2021 Leo Lakpa (member of FAC), UND Biomedical Sciences Ph.D.  
 Oct. 2017 ~ Jul. 2021 Smruthi Rudraraju (member of FAC), UND Biomedical Sciences Ph.D.  
 Nov. 2018 ~ May 2022 Sayem Bhuiyan (member of FAC), UND Biomedical Sciences Ph.D.  
 Apr. 2019 ~ May 2022 Joanna Handzlik (member of FAC), UND Biology Ph.D.  
 Jan. 2020 ~ Jul. 2021 Temidayo Adeluwa (chair of FAC), UND Biomedical Sciences M.S.  
 Aug. 2020 ~ Dec. 2021 Malak Alzidaneen (member of FAC), UND Biomedical Sciences M.S.  
 Mar. 2021 ~ Jul. 2024 Abiodun Ebenezer Odufuwa (member of FAC), UND Biomedical Sciences Ph.D.  
 Sep. 2021 ~ Oct. 2021 Oluwatobiloba Aminu, Darius Quansah (Laboratory rotation), UND Biomed  
 Nov. 2021 ~ Jan. 2022 Anna Corradi (Laboratory rotation), UND Biomed  
 Jan. 2022 ~ Aug. 2023 Oluwatobiloba Aminu (chair of FAC), UND Biomedical Sciences, M.S.  
 Jan. 2022 ~ Aug. 2023 Dehui Kong (member of FAC), UND Biology Ph.D.  
 Jan. 2022 ~ Blessing Okosun (member of FAC), UND Biology Ph.D.  
 Aug. 2022 ~ Sakuntha Gunarathna (member of FAC), UND Biomedical Sciences, Ph.D.  
 Jan. 2023 ~ Hasin Rehana (**chair of FAC**), UND Computer Sciences, Ph.D.  
 Aug. 2023 ~ Mostafa Elhennawy (member of FAC), UND Biomedical Sciences, Ph.D.  
 Jun. 2023 ~ Sarah Hong (Research mentor; remote), Columbia University. Undergraduate.  
 Dec. 2023 ~ Akhtar Hussain (member of FAC), UND Computer Science Ph.D.  
 Jan. 2024 ~ Mar. 2024 Goshen Miteu (Laboratory rotation), UND Biomedical Sciences, Ph.D.  
 Feb. 2024 ~ May. 2024 Michelle Murphy (Laboratory rotation), UND Biomedical Sciences, Ph.D.  
 Feb. 2024 ~ Benu Bansal (**chair of FAC**), UND Biomedical Engineering, Ph.D.  
 Mar. 2024 ~ Davis Payne (**chair of FAC**), UND Biomedical Engineering, Ph.D.  
 Apr. 2024 ~ Behnaz Karimialiabadi (**chair of FAC**), UND Biomedical Sciences, Ph.D.  
 Apr. 2024 ~ Kelsey Klinger (member of FAC), UND Counseling Psychology, Ph.D.  
 May 2024 ~ Hakan Celik (member of FAC), UND Biomedical Engineering, Ph.D.

Jul. 2024 ~ Mohammad Abuabdoh (member of FAC), UND Biomedical Engineering, Ph.D.  
Jan. 2025 ~ Frances Kujawski (member of FAC), UND Biology, Ph.D.  
Feb. 2025 ~ Arhita Das (member of FAC), UND Biology, Ph.D.

## Grant

### Current - External

1. NIH/NIAID U24 1U24AI171008 (MPIs: Tao, He, Hur)  
Role: MPI Total: \$3,839,270 (7/1/2022-6/30/2027)  
Title: VIOLIN 2.0: Vaccine Information and Ontology LInked kNowledgebase  
Note: 15% efforts.
2. NIH/NIDDK R01 R01DK130913 (MPIs: Feldman, Hur)  
Role: MPI Total: \$2,555,612 (8/23/2022-6/30/2026)  
Title: Metabolic coupling between Schwann cells and axons is functionally distinct from myelination and is disrupted in obesity, prediabetes, and diabetes  
Note: 17.5% efforts.
3. NIGMS P20 5P20GM113123 (MPIs: Combs & Bradley) (7/2021-6/2026)  
Role: Core Director Total: \$778,850 (Core)  
Title: Center for Excellence in Host Pathogen Interactions (HPI COBRE)  
Note: Establishment of Computational Data Analysis Core (CDAC)
4. NIH/NIGMS P20 CTR (PI: Schwartz)  
Role: Core Lead Total: \$10,774,235 (7/1/2024-6/30/2029)  
Title: Translational Science Engaging North Dakota (TRANSCEND)  
Note: Research Design, Compliance & Data Management Core

### Current - Internal

1. UND Epigenomics COBRE Pilot (MPI: Hur and Porter)  
Role: MPI (contact) Total: \$40,000 (7/1/2023-6/30/2025)  
Title: Spatial pattern of microglial transcriptomic response to  $\alpha$ -Synuclein overexpression in Thy1- $\alpha$ Synuclein mice  
Note: No cost extension
2. UND SMHS Pilot Grant (MPI: Dhasarathy, Brissette) (8/1/2014-7/31/2025)  
Role: Co-Investigator Total: \$50,000  
Title: Deciphering transcriptional and epigenetic priming mechanisms contributing to refractory Lyme disease

### Pending - External

1. Advanced Research Projects Agency for Health (PI: Tavakolian) (submitted in 4/2024)  
Role: Co-PI(Consultant) Total: \$16,997,834 (8/16/2024-8/15/2027)  
Title: Decentralized Diabetes Data Platform for Senior Health Management  
Note: Received a tentative award notice.
2. NIH R24 (MPI: He, Bergin, Nemzek, Hur) (submitted in 9/2024)  
Role: MPI Total: \$666,381 (UND) (7/1/2025-06/30/2029)  
Title: LAM-AI: Laboratory Animal Model Data Standardization, Annotation, and Translation via Ontology-Based Artificial Intelligence
3. NIH R01 (PI: Mathur) (submitted in 10/2024)  
Role: Co-Investigator Total: \$2,798,901 (7/1/2025-06/30/2030)  
Title: Targeting Epithelial Fucosylation to modulate CD8+ T Cell Exhaustion and Senescence in Colon Cancer
4. American Cancer Society (PI: Mathur) (submitted in 10/2024)  
Role: Co-Investigator Total: \$946,000 (7/1/2025-06/30/2029)  
Title: Modulating CD8+ T Cell Exhaustion and Senescence in Colon Cancer
5. NIH R21 (PI: Khan) (submitted in 11/2024)

- Role: Co-Investigator                      Total: \$70,965 (UND)                      (7/1/2025-06/30/2027)  
Title: Pathologic monocyte responses during influenza virus infection
6. NIH R01(PI: Nicholas Lyssenko Temple University)                      (submitted in 02/2025)  
Role: Co-Investigator                      Total: \$352,500 (UND)                      (9/1/2025-8/31/2030)  
Title: Omics signatures and Abeta/tau stage of low ABCA7 in Alzheimer's
7. NIH R01 (PI: Khan)                      (submitted in 02/2025)  
Role: MPI                      Total: \$913,441 (UND)                      (9/1/2025-08/31/2030)  
Title: Protective Lung Epithelial Defense During Influenza Infection
8. NIH R35 (PI: Mathur)                      (submitted in 01/2025)  
Role: Co-Investigator                      Total: \$1,937,750                      (7/1/2025-06/30/2030)  
Title: Mitochondrial Regulation of Treg Stability and Function in Immune Aging
9. NIH/NIGMS P20 COBRE (PI: Hur)                      (submitted in 02/2025)  
Role: Contact PI                      Total: \$10,524,124                      (12/1/2025-11/30/2030)  
Title: Center for Advanced Artificial Intelligence Applications in Biomedical Sciences

In preparation

None

Pending - Internal

None

Previous – External

1. Juvenile Diabetes Research Foundation, Postdoctoral Research Fellowship Grant  
Role: Project PI                      Total: \$136,620                      (3/1/2011-6/30/2014)  
Title: Cross-tissue transcriptomics predict diabetic complications
2. Diabetic Complication Consortium, Pilot & Feasibility Grant  
Role: Project PI                      Total: \$89,537                      (10/2015-1/2017)  
Title: Comparative Transcriptomics to Identify Key Gene Networks of Diabetic Neuropathy  
Note: 5% effort with salary support. Generating and analyzing RNA-Seq of human sural nerve samples obtained from diabetic neuropathy (DN) patients to identify critical gene regulatory network of DN.
3. NIDDK 1R24082841 (PI: Eva Feldman, U of Michigan)  
Role: Co-investigator                      Total: \$437,458 (UND)                      (4/2017-7/2021)  
Title: Integrated systems biology approach to diabetic microvascular complications  
Note: 20% efforts. My role involves bioinformatics analyses on diabetic complication-related high-throughput Omics data to identify critical genes and pathways, responsible for the development of diabetic complications. This grant supports 20% of my salary and 100% of one post-doctoral fellow.
4. NINDS R01 5R01NS120926                      (MPI: Goutman & Murdock at University of Michigan)  
Role: Co-investigator                      Total: \$49,852 (UND)                      (4/2023-3/2024 UND)  
Title: Creating a foundation for personalized age- and sex-based immune-targeted therapies from an ALS longitudinal cohort by identifying peripheral and central immune signatures.
5. NINDS R01 5R01NS065957                      (PI: Susan Masino, Trinity University)  
Role: Co-investigator                      Total: \$2,254,373                      (6/2018-6/2024)  
Title: Ketogenic diet and adenosine: epigenetics and antiepileptogenesis  
Note: 10% efforts. My role focuses on bioinformatics analyses of the high-throughput next-generation sequencing data (transcriptomics and methylomics) from animal models of epileptogenesis with/without two treatments.

Previous - Internal

1. UND COBRE Epigenomics and Development and Disease, Pilot Grant  
Role: Project PI                      Total: \$42,347                      (10/2015-5/2016)  
Title: RNA-Seq and Comparative Transcriptomics to Identify Key Gene Networks of Diabetic Neuropathy



Title: Correlated Epigenetic and Behavioral Modifications in  $\alpha$ -Synucleinopathy Disorders

Academic Consultant role

1. BD2K-LINCS DCIC External Research Project  
PI: Yongqun He, Ph.D. University of Michigan (2016-2018)  
Title: Ontology-based Cell Line Standardization, Integration, and LINCS Application
2. NIH R01 DA042156 (Funded)  
PI: Lucia Carvelli, Ph.D. (2016-2021)  
Title: Amphetamine-induced trans-generational effects
3. CDC  
PI: Eva Feldman, M.D., Ph.D., University of Michigan (2018-2021)  
Title: Metabolomic Signatures Linking ALS to Persistent Organic Pollutant Exposures.
4. NSF  
PI: Henry Neeman, Ph.D., University of Oklahoma (2018-2022)  
Title: Acquisition of a Regional Resource for Long-term Archiving of Large Scale Research Data Collections
5. NIH K99/R00  
PI: Amy Rumora, Ph.D., University of Michigan (2018-2022)  
Title: Sphingolipid and Fatty Acid Biology in Prediabetes and Neuropathy
6. NIH/NIEHS R01 ES030049  
PIs: Drs. Feldman & Batterman (U of Michigan) (2020-2024)  
Title: Mapping the ALS Exposome to Gain New Insights into Disease Risk and Pathogenesis  
Goal: To collect data that will offer a foundation to uncover key pathways and mechanisms linked to exposure-induced changes that may represent novel biomarkers and therapeutic targets, ultimately supporting the development of much-needed treatment options for ALS.
7. NIH/NIDDK K99/R01  
PI: Sarah Elzinga, U of Michigan (2023-2027)  
Title: Obesity and prediabetes-mediated neuroinflammation and cognitive decline: Identifying mechanism-based therapeutic targets and therapeutic windows
8. NIH Transformative grant ALS<sup>2</sup> (PI: Eva Feldman, U of Michigan) (2021-2026)  
Title: Developing novel strategies for personalized treatment and prevention of ALS: Leveraging the global exposome, genome, epigenome, metabolome, and inflammasome with data science in a case/control cohort
9. NIH/NIDDK K01  
PI: Stephanie Eid, U of Michigan (2023-2027)  
Title: NADPH Oxidases Nox4 and Nox5 are New Therapeutic Targets for Peripheral Neuropathy
10. Department of Defense (submitted 06/2024)  
PI: Eva Feldman, U of Michigan (2025-2029)  
Title: Whole blood transcriptomics identifies new gene expression signatures that provide personalized biomarkers in ALS
11. NIH R01 (submitted 02/2025)  
PI: Eva Feldman, U of Michigan (2025-2030)  
Title: Transcriptomics of blood samples in ALS: An untapped resource to advance diagnosis, prognosis, and drug discovery and to gain insights into the diverse molecular subtypes of disease

**Paid Consulting Activity**

1. YooJinBioSoft Co., Ltd., South Korea (01/2023-12/2026)  
Role: paid consultant  
Topic: drug repurposing
2. Inha University (PI: Dr. Dayeon Shin) (06/2024-03/2028)  
Role: paid consultant  
Project Topic: Development of a predictive model for onset timing of metabolic syndrome based on nutritional genetics/metabolites using multi-omics data

Project Number: Inha University 73232-1 (Korean Research Foundation RS-2024-00340086)

### Computational Tools

1. SciMiner (<http://hurlab.med.und.edu/SciMiner/>), a web-based literature mining tool.  
Recent updates: 4/19/2016 (system migration to a UND server)
2. PubChemSR (<https://sourceforge.net/projects/pubchemsr/>), a standalone tool for searching and retrieving data from the NCBI PubChem databases.  
Recent updates: 12/18/2019 (release of new public version 3.6.4)
3. DNMB2 (<http://hurlab.med.und.edu/DNMB2/>), an online data repository and analysis portal of diabetic neuropathy-related transcriptomics data. It currently supports a total of 140 differentially expressed gene sets from 18 diabetic neuropathy-related high-throughput gene expression profiling datasets.  
Recent updates: 10/21/2018 (release of version 2.1)
4. VennDetail (<http://hurlab.med.und.edu/VennDetail>; <https://github.com/hurlab/VennDetail>), is an R package that creates high-quality Venn-Pie charts and allows extraction of subset details from up to eight input sets. VennDetail has officially become a part of Bioconductor, an open-source software repository for bioinformatics.  
Recent updates: 2/10/2022 (release of version 1.10.0) (DOI: [10.18129/B9.bioc.VennDetail](https://doi.org/10.18129/B9.bioc.VennDetail)).  
Bioconductor version: <https://www.bioconductor.org/packages/release/bioc/html/VennDetail.html>
5. richR (<http://hurlab.med.und.edu/richR>; <https://github.com/hurlab/richR>), an R package allowing functional enrichment analysis and visualization of gene sets obtained from high-throughput next-generation sequencing data.  
Recent updates: 1/20/2025
6. Tox21 Enricher (<http://hurlab.med.und.edu/Tox21Enricher/>), an online chemical enrichment analysis tool for the Tox21 toxicology screening platform.  
Recent updates: 4/2023  
We have been focusing on an R-version of Tox21 Enricher.  
<https://github.com/hurlab/tox21enricher> (version 2.4.0; 4/25/2023)
7. RichStudio (<http://hurlab.med.und.edu:3838/RichStudio/>), an R Shiny App for performing functional enrichment analysis as well as gene-based clustering analysis.  
Recent updates: 1/7/2024 (release of version 0.0.5) – ongoing development
8. RichCluster (<https://github.com/hyuncat/RichCluster>), a fast C++ agglomerative hierarchical clustering algorithm packaged into easily callable R functions, designed to help cluster biological 'terms' based on how similar of genes are expressed in their activation.  
Recent updates: 1/31/2025 – ongoing development
9. scGEN (<https://github.com/hurlab/scGEN/>), is a gene-aware embedding network designed to improve single-cell RNA-seq clustering by emphasizing challenging samples and preserving complex cellular relationships. By incorporating an adaptive weighting strategy and fine-tuning parameters for highly variable genes, scGEN enhances clustering accuracy, outperforming seven leading methods across multiple datasets.  
Recent updates: 1/31/2025 – ongoing development

### Conference Organization

1. The 6<sup>th</sup> Vaccines and Drug Ontology Studies (VDOS) workshop. Sep.13-15, 2017. Newcastle Upon Tyne, UK. (Co-organizer)
2. The 7<sup>th</sup> Vaccines and Drug Ontology Studies (VDOS) workshop. Aug. 7-10, 2018. Corvallis, Oregon, USA. (Co-organizer)
3. The 8<sup>th</sup> Vaccines and Drug Ontology Studies (VDOS) workshop. Jul. 29 – Aug. 2, 2019. Buffalo, New York. (Co-organizer)
4. The 9<sup>th</sup> Vaccines and Drug Ontology Studies (VDOS) workshop. Sep. 17, 2020. Virtual (Co-organizer)
5. The 10<sup>th</sup> Vaccines and Drug Ontology Studies (VDOS) workshop. Sep. 18, 2021. Virtual (Co-organizer)

6. The 13<sup>th</sup> International Conference of Biological Ontologies (ICBO) 2022, Sep. 25-28, 2022. Ann Arbor, MI and Virtual (Program Committee member)
7. The 11<sup>th</sup> Vaccines and Drug Ontology Studies (VDOS) workshop. Sep. 26, 2022. Ann Arbor, MI and Virtual (Co-organizer)
8. The 14<sup>th</sup> International Conference on Bioinformatics Models, Methods and Algorithms. BIOINFORMATICS 2023. Feb. 16-18, 2023, Lisbon, Portugal. (Program Committee member)
9. The 15<sup>th</sup> International Conference on Bioinformatics Models, Methods and Algorithms. BIOINFORMATICS 2024. Feb. 21-23, 2024, Rome, Italy (Program Committee member)
10. The 12<sup>th</sup> Vaccines and Drug Ontology Studies (VDOS) workshop. Aug. 29, 2023. University of Brasilia, Brasilia, DF, Brazil and Virtual (Co-organizer)
11. The second International Workshop on Pattern Recognition in Healthcare Analytics (PRHA), in conjunction with the 15<sup>th</sup> Asian Conference on Machine Learning. Istanbul, Turkey, November 11, 2023. (Program Committee member)
12. The 13<sup>th</sup> Vaccines and Drug Ontology Studies (VDOS) workshop. Jul. 22, 2024. University Twente, Enschede, The Netherlands. Hybrid (Co-organizer)
13. The third International Workshop on Pattern Recognition in Healthcare Analytics (PRHA), in conjunction with the 27<sup>th</sup> International Conference on Pattern Recognition (ICPR). Kolkata, India. December 01-05, 2024. (Program Committee member)
14. The 16<sup>th</sup> International Conference on Bioinformatics Models, Methods and Algorithms. BIOINFORMATICS 2025. Feb. 20-22, 2025, Porto, Portugal (Program Committee member)
15. The 2<sup>nd</sup> VIOLIN 2.0 Annual U24 Retreat 2024. April 3, 2024. Virtual. (Organizer)
16. The 3<sup>rd</sup> VIOLIN 2.0 Annual U24 Retreat 2025. April 9 & 16, 2025. Virtual. (Organizer)

### Professional Competition Participation

1. Text Analysis Conference (TAC) 2017 – Adverse Drug Reaction Extraction from Drug Labels (ADR) track. Our team, CONDL, participated in this text mining challenge, and **our best result ranked 4<sup>th</sup> out of 14 teams**. Two peer-reviewed papers were generated out of this challenge participation (Tiftikci et al, 2019 BMC Bioinformatics [PMID: [31865904](#)] and Hur et al, 2018, JBMS [PMID: [29880031](#)])
2. Food and Drug Administration (FDA) Adverse Drug Event Evaluation (ADR Eval) via MITRE aimed to develop an automatic text mining system to identify ADR mentions in drug labels. Our team, CONDL, participated in this challenge between November 2018 and February 2019. The performance evaluation results were released to the participants in October 2019. Among 23 submissions from 13 teams, **our best-performing submission achieved the best precision (accuracy)**.
3. Critical Assessment of Massive Data Analysis – CMap Drug Safety Challenge. July 13-14, 2020, as a part of the Intelligent Systems for Molecular Biology conference (virtual).
4. Pediatric COVID-19 Data Challenge, sponsored by BARDA. (Aug 19 - Dec 17, 2021; Participated)
5. Long COVID Computational Challenge, NIH (Oct-Dec, 2022; Participated; EBioMedicine [PMID: [39321500](#)] co-author as “Long COVID Computational Challenge Participants; N3C Consortium”)
6. BioASQ Task BioNNE: Nested NER in Russian and English. The 2<sup>nd</sup> places for all three tracks (Track1: Bilingual Nested NER; Track 2: English Nested NER; and Track 3: Russian Nested NER). Part of the CLEF 2024 Conference and Labs of the Evaluation Forum Information Access Evaluation meets Multilinguality, Multimodality, and Visualization 9-12 September 2024, Grenoble – France. One peer-reviewed conference proceedings paper was generated (<https://ceur-ws.org/Vol-3740/paper-18.pdf>)
7. Phase 2 PREPARE: Pioneering Research for Early Prediction of Alzheimer's and Related Dementias EUREKA Challenge. Participated in the Social Determinants Track to build advanced algorithms and analytic approaches for early prediction of AD/ADRD. October-December 2024.

### Publications

Original Papers – Peer-reviewed (\*: equal contribution, †: co-corresponding authorship)

1. Lee S, Hur J, Kim Y. A graph-theoretic modeling on GO space for biological interpretation of gene clusters. *Bioinformatics*. 20(3):381-388, 2004. [PMID: [14960465](#)]

2. Lee K, [Hur J](#), Yoo J. Twin weight discordance and maternal weight gain in twin pregnancies. *International Journal of Gynecology Obstetrics*. 96(3):176-180, 2007. [PMID: 17291507]
3. [Hur J](#), Wild D. PubChemSR: A search and retrieval tool for PubChem. *Chemistry Central Journal*. 2:11, 2008. [PMID: 18482452]
4. [Hur J](#), Schuyler AD, States DJ, Feldman EL. SciMiner: Web-based literature mining tool for target identification and functional enrichment analysis. *Bioinformatics*. 25(6):838-40, 2009. [PMID: 19188191]
5. [Hur J](#), Sullivan KA, Schuyler AD, Hong Y, Pande M, States DJ, Jagadish HV, Feldman EL. Literature-based discovery of diabetes- and ROS-related targets. *BMC Medical Genomics*. 2010 [PMID: 20979611]
6. Pande M, [Hur J](#), Hong Y, Backus C, Hayes JM, Oh SS, Kretzler M, and Feldman EL. Transcriptional profiling of diabetic neuropathy in the BKS db/db mouse, a model of type 2 diabetes. *Diabetes*. 2011 [PMID: 21617178]
7. [Hur J](#), Xiang Z, Feldman EL, and He Y. Ontology-based Brucella vaccine literature indexing and systematic analysis of gene-vaccine association network. *BMC Immunology*. 2011 [PMID: 21871085]
8. Lee S, [Hur J](#), Lee KJ. Pregnancy outcome and relationship between maternal weight gain and fetal birth weight in Korean pregnant women with hyperglycemia. *Journal of Women's Medicine*, 2011;4(2):35-40, doi: 10.5468/jwm.2011.4.2.35 [Full text]
9. Kim MK, [Hur J](#), Lee SY, Kim YL, Park KS, Park SW, and Lee KJ. Maternal obesity and associated risk of adverse pregnancy outcomes in women with hyperglycemia. *Korean Journal of Obstetrics and Gynecology*. 2011;54(10):591-598, doi: 10.5468/KJOG.2011.54.10.591 [Full text]
10. [Hur J](#), Sullivan KA, Pande M, Hong Y, Sima AAF, Jagadish HV, Kretzler M, and Feldman EL. The identification of gene expression profiles predictive of human diabetic neuropathy. *Brain*. 2011, Nov;134(Pt 11):3222-35 [PMID: 21926103]
11. [Hur J\\*](#), Ozgur A\*, Xiang Z, and He Y. Identification of fever and vaccine-associated gene interaction networks using ontology-based literature mining. *Journal of Biomedical Semantics*. 2012, 3:18. [PMID: 23256563]
12. Dowling JJ, Arbogast S, [Hur J](#), Waugh T, Nelson DD, McEvoy Anna, Marty I, Monnier N, Lunardi J, Brooks SV, Kuwada JY, and Ferreiro A. Oxidative Stress and Successful Antioxidant Treatment in RYR1-related Myopathies. *Brain*. 2012; 135, 1115-1127. [PMID: 22418739]
13. Sims-Robinson C, Zhao S, [Hur J](#), and Feldman EL. Central nervous system endoplasmic reticulum stress in a murine model of type 2 diabetes. *Diabetologia*. 2012, 55:2276-2284. [PMID: 22581041]
14. Figueroa-Romero C\*, [Hur J\\*](#), Bender DE, Delaney CE, Cataldo MD, Smith AL, Yung R, Ruden DM, Callaghan BC, and Feldman EL. Identification of Epigenetically Altered Genes in Sporadic Amyotrophic Lateral Sclerosis. *PLoS One*. 2012, 7:e52672. [PMID: 23300739]
15. Han J, Back SH, [Hur J](#), Lin YH, Gildersleeve R, Shan J, et al. ER-stress-induced transcriptional regulation increases protein synthesis leading to cell death. *Nature Cell Biology*. 2013 May;15(5):481-90 [PMID: 23624402]
16. Sims-Robinson C, [Hur J](#), Hayes JM, Dauch JR, Keller PJ, Brooks SV, and Feldman EL. The role of oxidative stress in nervous system aging. *PLoS One*. 2013 Jul 2;8(7):e68011. doi: 10.1371/journal.pone.0068011. Print 2013. [PMID: 23844146]
17. [Hur J](#), Sullivan KA, Callaghan BC, Pop-Busui R, and Feldman EL. Identification of factors associated with sural nerve regeneration and degeneration in diabetic neuropathy. *Diabetes Care*. 2013, 2013 Dec;36(12):4043-9. [PMID: 24101696]
18. He Y, Racz R, Sayers S, Lin Y, Todd T, [Hur J](#), Li X, Patel M, Zhao B, Chung M, Ostrow J, Sylora A, Dungarani P, Ulysse G, Kochhar K, Vidri B, Strait K, Jourdain GW, and Xiang Z. Updates on the VIOLIN Vaccine Database and Analysis System. *Nucleic Acids Research*. 2014 Jan 1; 42(1): D1124-32 [PMID: 24259431]
19. Todd PK, Ackall FY, [Hur J](#), Sharma K, Paulson HL, Dowling JJ. Transcriptional changes and developmental abnormalities in a Zebrafish model of Myotonic Dystrophy. *Disease Models & Mechanisms*. 2014 Jan;7(1):143-55. doi: 10.1242/dmm.012427. Epub 2013 Oct 2. [PMID: 24092878]
20. Feldman EL, Boulis NM, [Hur J](#), Johe K, Rutkove SB, Federici T, Polak M, Bordeau J, Sakowski SA, and Glass JD. Intraspinal Neural Stem Cell Injections in ALS Patients: Phase I Trial Outcomes. *Annals of*

- Neurology*. 2014 [PMID: 24510776]
21. Waugh TA, Horstick E, Hur J, Jackson SW, Li X, and Dowling JJ. Fluoxetine prevents dystrophic changes in a zebrafish model of Duchenne muscular dystrophy. *Human Molecular Genetics*. 2014 Apr 23. [PMID: 24760771]
  22. O'Brien PD, Hur J, Hayes JM, Lindblad CN, and Feldman EL. BTBR ob/ob mice as a novel diabetic neuropathy model: Neurological characterization and gene expression analyses. *Neurobiology of Disease*. 2014 Oct 30;73C:348-355. [PMID: 25447227]
  23. Hur J, Guo A, Loh W, Feldman EL, and Bai JP. Integrated systems pharmacology analysis of clinical drug-induced peripheral neuropathy. *Clinical Pharmacology and Therapeutics: Pharmacometrics and Systems Pharmacology*. 2014 May 14;3:e114. doi: 10.1038/psp.2014.11. [PMID: 24827872]
  24. Hur J\*, Liu Z\*, Tong W, Laaksonen R, and Bai PF. Drug-Induced Rhabdomyolysis: from systems pharmacology network analysis to biochemical flux analysis. *Chemical Research in Toxicology*. 2014 [PMID: 24422454]
  25. Hur J\*, Ozgur A\*, Xiang Z, and He Y. Development and Application of an Interaction Network Ontology (INO) for Literature Mining of Vaccine-associated Gene-Gene Interactions. *Journal of Biomedical Semantics*. 2015 Jan 6;6:2. [PMID: 25785184]
  26. Chan WKB, Zhang H, Yang J, Brender JR, Hur J, Ozgur A, and Zhang Y. GLASS: a comprehensive database for experimentally-validated GPCR-ligand associations. *Bioinformatics*. 2015 May 13. Pii: btv302 [PMID: 25971743]
  27. Hur J<sup>S</sup>, Zhao CS, and Bai JPF<sup>S</sup>. Systems Pharmacological Analysis of Drugs Inducing Stevens–Johnson Syndrome and Toxic Epidermal Necrolysis. *Chemical Research in Toxicology*. 2015 May 18;28(5):927-34. doi: 10.1021/tx5005248. [PMID: 25811541]
  28. Hur J\*, Dauch JR\*, Hinder ML, Hayes JM, Backus C, Sakowski SA, and Feldman EL. The Metabolic Syndrome and Microvascular Complications in a Murine Model of Type 2 Diabetes. *Diabetes*. 2015 Sep;64(9):3294-304. doi: 10.2337/db15-0133. Epub 2015 May 15. [PMID: 25979075]
  29. O'Brien PD, Hur J, Robell NJ, Hayes JM, Sakowski SA, and Feldman EL. Gender-specific differences in diabetic neuropathy in BTBR ob/ob mice. *Journal of Diabetic Complications*. 2015 Oct 3. doi: 10.1016/j.jdiacomp.2015.09.018. [PMID: 26525588]
  30. Cho EH, Hur J, and Lee KJ. Early gestational weight gain and the adverse pregnancy outcomes in Korean women. *PLOS One*. 2015 Oct 14;10(10):e0140376. doi: 10.1371/journal.pone.0140376. [PMID: 26465322]
  31. Karadeniz I, Hur J<sup>S</sup>, He Y<sup>S</sup>, and Özgür A<sup>S</sup>. Literature Mining and Ontology based Analysis of Host-Brucella Gene-Gene Interaction Network. *Frontiers Research Topics Microbiology*. 2015 Dec 9;6:1386. doi: 10.3389 [PMID: 26696993]
  32. Figueroa-Romero C\*, Hur J\*, Lunn JS, Paez-Colasante X, Bender DE, Yung R, Sakowski SA, Feldman EL. Expression of microRNAs in human post-mortem amyotrophic lateral sclerosis spinal cords provides insight into disease mechanisms. *Molecular and Cellular Neuroscience*. 2015 Dec 17;71:34-45. doi: 10.1016 [PMID: 26704906]
  33. Guo A, Racz R, Hur J, Lin Y, Xiang Z, Zhao L, Rinder J, Jiang G, Zhu Q, and He Y. Ontology-based collection, representation and analysis of drug-associated neuropathy adverse events. *Journal of Biomedical Semantics*. 2016 May 21;7:29. doi: 10.1186/s13326-016-0069-x. [PMID: 27213033]
  34. Sas KM, Kayampilly P, Byun J, Nair V, Hinder LM, Hur J, Zhang H, Lin C, Qi NR, Michailidis G, Groop PH, Darshi M, Sharma K, Schelling JR, Sedor JR, Pop-Busui R, Weinberg JM, Soleimanpour SA, Abcouwer SF, Gardner TW, Burant CF, Feldman EL, Kretzler M, Brosius FC, and Pennathur S. Tissue-specific metabolic reprogramming drives nutrient flux in diabetic complications. *Journal of Clinical Investigation*. 2016 Sep 22;1(15):e86976 [PMID: 27699244]
  35. Hur J<sup>S</sup>, O'Brien PD, Nair V, Hinder LM, McGregor BA, Jagadish HV, Kretzler M, Brosius FC, and Feldman EL<sup>S</sup>. Transcriptional networks of murine diabetic peripheral neuropathy and nephropathy: Common and distinct gene expression patterns. *Diabetologia*. 2016 Mar 21 [PMID: 27000313]
  36. Krishanan KC, Santhosh M, Alagarsamy J, Hur J, Nookala Suba, Norrby-Teglund A, and Kotb M. Genetic Architecture of Group A Streptococcal Necrotizing Soft Tissue Infections in the mouse. *PLOS Pathogens*. 2016 Jul 11;12(7):e1005732. doi: 10.1371/journal.ppat.1005732. [PMID: 27399650]

37. Ozgur A\*, Hur J\*, and He Y. The Interaction Network Ontology-supported modeling and mining of complex interactions represented with multiple keywords in biomedical literature. *BioData Mining*. 2016 Dec 19;9:41. doi: 10.1186/s13040-016-0118-0. [PMID: 28031747]
38. Hur J, Cho EH, Baek KH, and Lee KJ. Prediction of Gestational Diabetes Mellitus by Unconjugated Estriol Levels in Maternal Serum. *International Journal of Medical Sciences*. 2017 Feb 7;14(2):123-127. doi: 10.7150/ijms.17321. [PMID: 28260987]
39. Hur J<sup>S</sup>, Ozgur A, He Y. Ontology-based literature mining of E. coli vaccine-associated gene interaction networks. *Journal of Biomedical Semantics*. 2017 Mar 14;8(1):12. doi: 10.1186/s13326-017-0122-4. [PMID: 28288685]
40. Hinder LM\*, Park M\*, Rumora AE\*, Hur J, Eichinger F, Pennathur S, Kretzler M, Brosius FC, and Feldman EL. Comparative RNA-Seq Transcriptome Analyses Provide New Insights into Diabetic Neuropathy and Nephropathy. *Journal of Cellular and Molecular Medicine*. 2017 Mar 8. doi: 10.1111/jcmm.13136. [PMID: 28272773]
41. Lee KJ, Hur J, Yang KS, Lee MK, and Lee SJ. Acute biophysical responses and the psychological effects of different types of forests in patients with metabolic syndrome. *Environment and Behavior*. 2017 Mar 31. Doi: 10.1177/0013916517700957 [Full text]
42. Shin DY, Hur J, Cho EH, Chung HK, Shivappa N, Wirth M, Hebert J, and Lee KW. Pre-pregnancy Body Mass Index is Positively Associated with Dietary Inflammatory Index and C-Reactive Protein Concentrations during Pregnancy. *Nutrients*. 2017 Apr 1;9(4). pii: E351. doi: 10.3390/nu9040351. [PMID: 28368304]
43. Witt KL, Hsieh JH, Smith-Roe S, Xia M, Huang R, Auerbach SS, Hur J, Tice RR. Assessment of the DNA Damaging Potential of Environmental Chemicals Using a Quantitative High-Throughput Screening Approach to Measure p53 Activation. *Environmental and Molecular Mutagenesis*. 2017 Aug;58(7):494-507. doi: 10.1002/em.22112. Epub 2017 Jul 17. [PMID: 28714573]
44. Cho EH, Shin DY, Cho KH, and Hur J<sup>S</sup>. Prevalences and management of diabetes and pre-diabetes among Korean teenagers and young adults: Results from the Korean National Health and Nutrition Examination Survey 2005-2014. *Journal of Korean Medical Sciences*. 2017 Dec;32(12):1984-1990. doi: 10.3346/jkms.2017.32.12.1984. [PMID: 29115080]
45. Hinder LM, Murdock BJ, Park M, Bender DE, O'Brien PD, Rumora AE, Hur J, and Feldman EL. Transcriptional networks of progressive diabetic peripheral neuropathy in the db/db mouse model of type 2 diabetes: An inflammatory story. *Experimental Neurology*. 2018 Jul;305:33-43. doi: 10.1016/j.expneurol.2018.03.011. [PMID: 29550371]
46. Hur J<sup>S</sup>, Ozgur A, He Y<sup>S</sup>. Ontology-based literature mining and class effect analysis of adverse drug reactions associated with neuropathy-inducing drugs. *Journal of Biomedical Semantics*. 2018 Jun 7;9(1):17. doi: 10.1186/s13326-018-0185-x. [PMID: 29880031]
47. Messinis D, Melas IN, Hur J, Varshney N, Alexopoulos LG, and Bai J.P.F., Translational systems pharmacology-based predictive assessment of drug-induced cardiomyopathy. *CPT: Pharmacometrics & Systems Pharmacology*. 2018 Mar;7(3):166-174. doi: 10.1002/psp4.12272. Epub 2018 Jan 17. [PMID: 29341478]
48. de Anda-Jáuregui G, Guo K, McGregor B, and Hur J<sup>S</sup>. Exploration of the anti-inflammatory drug space through network pharmacology. *Frontiers in Physiology*. 2018 Mar 1;9:151. doi: 10.3389/fphys.2018.00151. eCollection 2018. [PMID: 29545755]
49. Hur J<sup>S</sup>, Danes L, Hsieh JH, Krout D, McGregor BA, and Auerbach SS. Tox21 Enricher: Web-based Chemical and Functional Enrichment Analysis Tool for Tox21 Toxicity Screening Platform. *Molecular Informatics*. 2018 May;37(5):e1700129. doi: 10.1002/minf.201700129. Epub 2018 Jan 29. [PMID: 29377626]
50. Tank EM\*, Figueroa-Romero C\*, Hinder LM, Bedi K, Archbold HC, Li X, Weskamp K, Safren N, Paez-Colasante X, Pacut C, Thummas S, Paulsen MT, Guo K, Hur J, Ljungman M, Feldman EL, and Barmada SJ. Abnormal RNA stability in amyotrophic lateral sclerosis. *Nature Communications*. 2018 Jul 20;9(1):2845. doi: 10.1038/s41467-018-05049-z. [PMID: 30030424]
51. de Anda-Jáuregui G, Espinal-Enriquez J, Hur J, Alcalá-Corona SA, Ruiz-Azuara L, and Hernandez-Lemus E. Identification of Casiopeina II-gly secondary targets through a systems pharmacology approach. *Computational Biology and Chemistry*, 2018 Nov 23;78:127-132. doi:

- 10.1016/j.compbiochem.2018.11.021. [PMID: 30504090]
52. McGregor BA, Eid S, Murdock B, Guo K, de Anda-Jáuregui G, Porter J, Feldman EL, and Hur J<sup>S</sup>. Conserved Transcriptional Signatures in Human and Murine Diabetic Peripheral Neuropathy. *Scientific Reports*. 2018 Dec 5;8(1):17678. doi: 10.1038/s41598-018-36098-5. [PMID: 30518872]
53. Cho KH, Cho EH, Hur J, and Shin D. Association of sleep duration and obesity according to sex and age in Korean Adults: Results from the Korea National Health and Nutrition Examination Survey 2007–2015. *Journal of Korean Biomedical Sciences*. 2018 Dec 17;33(53):e345. doi: 10.3346/jkms.2018.33.e345. eCollection 2018 Dec 31. [PMID: 30595686]
54. Shin D\*, Hur J\*, Cho KH, and Cho E. Trends of self-reported sleep duration in Korean Adults: Results from the Korea National Health and Nutrition Examination Survey 2007–2015. *Sleep Medicine*. 2018 Dec; 52:103-106. doi: 10.1016/j.sleep.2018.08.008 [PMID: 30308449]
55. de Anda-Jáuregui G, Guo K, McGregor B, Feldman EL and Hur J<sup>S</sup>. Pathway crosstalk perturbation network modeling for identification of connectivity changes induced by diabetic neuropathy and pioglitazone. *BMC Systems Biology*. 2019 Jan 7;13(1):1. doi: 10.1186/s12918-018-0674-7. [PMID: 30616626]
56. de Anda-Jáuregui G, Guo K, and Hur J<sup>S</sup>. Network-based assessment of adverse drug reaction risk in polypharmacy using high-throughput screening data. *International Journal of Molecular Sciences. Frontiers in Drug Toxicity Prediction*. 2019 Jan 17;20(2). pii: E386. doi: 10.3390/ijms20020386. [PMID: 30658437]
57. de Anda-Jáuregui G, McGregor B, Guo K, and Hur J<sup>S</sup>. A network pharmacology approach for the identification of common mechanisms of drug-induced peripheral neuropathy. *CPT-Pharmacometrics & Systems Pharmacology*. 2019 Feb 14. doi: 10.1002/psp4.12383. [PMID: 30762308]
58. Guo K\*, Elzinga S\*, Eid S, Figueroa-Romero C, Hinder LM, Pacut C, Feldman EL, and Hur J<sup>S</sup>. Genome-wide DNA methylation profiling of human diabetic peripheral neuropathy in subjects with type 2 diabetes mellitus. *Epigenetics*. 2019 Aug;14(8):766-779. doi: 10.1080/15592294.2019.1615352. [PMID: 31132961]
59. Elzinga S, Murdock BJ, Guo K, Hayes JM, Tabbey MA, Hur J, and Feldman EL. Toll-like receptors and inflammation in metabolic neuropathy: a role in early versus late disease? *Experimental Neurology*. 2019 May 28; 320:112967. Doi: 10.1016/j.expneurol.2019.112967. [PMID: 31145897]
60. Figueroa-Romero C\*, Guo K\*, Murdock BJ\*, Paez-Colasante X\*, Bassis CM, Mikhail KA, Raue KD, Evans MC, Taubman GF, McDermott AJ, O'Brien PD, Savelieff MG, Hur J, and Feldman EL. Temporal evolution of the microbiome, immune system and epigenome with disease progression in ALS mice. *Disease Models & Mechanisms*. 2019 Oct 9. pii: dmm.041947. doi: 10.1242/dmm.041947. [PMID: 31597644].
61. O'Brien PD\*, Guo K\*, Eid SA\*, Rumora AE\*, Hinder LM\*, Hayes JM, Mendelson FE, Hur J, and Feldman EL. Integrated Lipidomic and Transcriptomic Analyses Identify Altered Nerve Triglycerides in Mouse Models of Prediabetes and Type 2 Diabetes. *Diabetes, Obesity and Metabolism*. 2019 Dec 10. pii: dmm.042101. [PMID: 31822493]
62. Tiftikci M, Ozgur A, He Y, and Hur J<sup>S</sup>. Machine learning-based identification and rule-based normalization of adverse drug reactions in drug labels. *BMC Bioinformatics*. 2019 Dec 23;20(Suppl 21):707. [PMID: 31865904]
63. He Y, Yu H, Ong E, Wang Y, Liu Y, Huffman A, Huang H, Beverley J, Hur J, Yang X, Chen L, Omenn G, Athey B, and Smith B. CIDO, a community-based ontology for coronavirus disease knowledge and data integration, sharing, and analysis. *Scientific Data*. 2020 Jun 12;7(1):181. doi: 10.1038/s41597-020-0523-6. [PMID: 32533075]
64. Guo K\*, Eid S\*, Elzinga S\*, Pacut C, Feldman EL, and Hur J<sup>S</sup>. Genome-wide profiling of DNA methylation and gene expression identifies candidate genes for human diabetic neuropathy. *Clinical Epigenetics*. 2020 Aug 12;12(1):123. doi: 10.1186/s13148-020-00913-6. [PMID: 32787975]
65. Paez-Colasante X, Figueroa-Romero C, Rumora AE, Hur J, Mendelson FE, Hayes JM, Backus C, Taubman GF, Heinicke L, Walter NG, Barmada SJ, Sakowski SA, and Feldman EL. Cytoplasmic TDP43 Binds MicroRNAs: New Disease Targets in Amyotrophic Lateral Sclerosis. *Frontiers in Cellular Neuroscience, section Cellular Neuropathology*. 2020 May 12;14:117. doi: 10.3389/fncel.2020.00117. eCollection 2020. [PMID: 32477070]
66. Gao P, Guo K, Pu Q, Wang Z, Lin P, Qin S, Khan N, Hur J, Liang H, and Wu M. oprC Impairs Host Defense

- by Increasing the Quorum-Sensing-Mediated Virulence of *Pseudomonas aeruginosa*. *Frontiers in Immunology*. 2020 Aug 4;11:1696. doi: 10.3389/fimmu.2020.01696. eCollection 2020. [PMID: 32849593]
67. Won S, Cho YJ, Lee N, Kim M, Kim MK, Jung YW, Yun BS, Seong SJ, Hur J, and Kim ML. Atypical endometriosis is related to a higher recurrence rate. *European Journal of Obstetrics & Gynecology and Reproductive Biology*. 2020 Sep 6. doi: 10.1016/j.ejogrb.2020.08.054 [PMID: 32920422]
68. Shin D., Lee KJ, Adeluwa T, and Hur J<sup>S</sup>. Machine Learning-Based Predictive Modeling of Postpartum Depression. *Journal of Clinical Medicine*. 2020, 9(9), 2899; <https://doi.org/10.3390/jcm9092899> [Full text]
69. Goutman SA, Boss J, Alakwaa F, Guo K, Hur J, Kim S, and Feldman EL. Untargeted metabolomics yields insight into ALS disease mechanisms. *Journal of Neurology, Neurosurgery, and Psychiatry*. 2020 Sep 14:jnnp-2020-323611. doi: 10.1136/jnnp-2020-323611. [PMID: 32928939]
70. Liu Y, Hur J, Chan WKB, Wang Z, Xie J, Sun D, Handelman S, Sexton J, Yu H, and He Y. Ontological modeling and analysis of experimentally or clinically verified drugs against coronavirus infection. *Scientific Data*. 2021 Jan 13;8(1):16. doi: 10.1038/s41597-021-00799-w. [PMID: 33441564]
71. Eid SA, Hinder LM, Zhang H, Eksi R, Nair V, Eddy S, Eichinger F, Park M, Saha J, Berthier CC, Jagadish HV, Guan Y, Pennathur S, Hur J, Kretzler M, Feldman EL, and Brosius FC. Gene expression profiles of diabetic kidney disease and neuropathy in eNOS knockout mice: Predictors of pathology and RAS blockade effects. *FASEB journal*. 2021 May;35(5):e21467. doi: 10.1096/fj.202002387R. [PMID: 33788970]
72. Abbas A, Witte T, Patterson WL, Fahrman J, Guo K, Hur J, Hardman WE, and Georgel PT. Epigenetic reprogramming mediated by maternal diet rich in omega-3 fatty acids protects from breast cancer development in F1 offspring. *Frontiers in Cell Developmental Biology*. 2021 Jun 10;9:682593. doi: 10.3389/fcell.2021.682593. eCollection 2021. [PMID: 34179012] [PMCID: PMC8222782]
73. Hur J, Yoo J, Shin D, Baek KH, Park, and Lee KJ. Predictability of Macrosomic Birth based on Maternal Factors and Fetal Aneuploidy Screening Biochemical Markers in Hyperglycemic Mothers. *International Journal of Medical Sciences*. 2021; 18(12):2653-2660. doi:10.7150/ijms.49857. [Full text] [PMCID: PMC8176187]
74. Smith NA, Germundson DL, Gao P, Hur J, Floden AM, and Nagamoto-Combs K. Anxiety-like behavior and intestinal microbiota changes as strain-and sex-dependent sequelae of mild food allergy in mouse models of cow's milk allergy. *Brain Behavioral Immunology*. 2021 Mar 9;S0889-1591(21)00104-5. doi: 10.1016/j.bbi.2021.03.002. [PMID: 33705867]
75. Wang Z\*, Guo K\*, Gao P, Pu Q, Lin P, Qin S, Xie N, Hur J, Li C, Huang C, and Wu M. Microbial and genetic-based framework identifies drug targets in inflammatory bowel disease. *Theranostics*. 2021; 11(15):7491-7506. doi:10.7150/thno.59196. [PMID: 34158863]
76. McGregor BA, Schommer J, Guo K, MD Raihan, Ghribi O, Hur J<sup>S</sup>, and Porter JE<sup>S</sup>. Alpha-Synuclein-induced Methylation and Gene Expression Changes in Microglia. *Neuroscience*. 2021 Aug 1;468:186-198. doi: 10.1016/j.neuroscience.2021.05.027. Epub 2021 May 31. [PMID: 34082066]
77. Adeluwa T, McGregor BA, Guo K, and Hur J<sup>S</sup>. Predicting drug-induced liver injury using Machine Learning on a Diverse Set of Predictors. *Frontiers in Pharmacology Pharmacogenetics and Pharmacogenomics*. 2021. Front Pharmacol. 2021 Aug 18;12:648805. doi: 10.3389/fphar.2021.648805. eCollection 2021 [PMID: 34483896]
78. Lo TW, Figueroa-Romero C, Hur J, Pacut C, Stoll E, Spring C, Lewis R, Nair A, Goutman SA, Sakowski SA, Nagrath S, Feldman EL. Extracellular Vesicles in Serum and Central Nervous System Tissues Contain microRNA Signatures in Sporadic Amyotrophic Lateral Sclerosis. *Frontiers in Molecular Neuroscience*. 2021 Oct 29;14:739016. doi: 10.3389/fnmol.2021.739016. eCollection 2021. [PMID: 34776863]
79. Wang Z, Guo K, Gao P, Pu Q, Li C<sup>S</sup>, Hur J<sup>S</sup>, Wu M<sup>S</sup>. Repurposable drugs for SARS-CoV-2 and influenza sepsis with scRNA-seq data targeting post-transcription modifications. *Precision Clinical Medicine*. 2021. pbab022 [Full text] [PMID: 34993416]
80. Guo K, Savellief MG, Rumora AE, Alakwaa Fm, Callaghan BC, Hur J, Feldman EL. Plasma metabolomics and lipidomics differentiate obese individuals by peripheral neuropathy status. *The Journal of Clinical Endocrinology & Metabolism*. J Clin Endocrinol Metab. 2021 Nov 20:dgab844. doi: 10.1210/clinem/dgab844. [PMID: 34878536]
81. Raihan MDO, McGregor BA, Velaris NA, Brishti A, Hur J<sup>S</sup>, Porter JE<sup>S</sup>. Method of Microglial DNA-RNA

- purification from Adult Mouse Single Brain. *Methods and Protocols*. Methods Protoc. 2021 Dec 2;4(4):86. doi: 10.3390/mps4040086 [PMID: 34940397]
82. Boison D, Masino SA, Lubin FD, Guo K, Lusardi T, Sanchez R, Ruskin DN, Ohm J, Geiger JD, and Hur J\*. Protocol matters – reproducibility and rigor of DNA methylation data sets. *Scientific Reports* Sci Rep. 2022 Jan 10;12(1):380. doi: 10.1038/s41598-021-04346-w. [PMID: 35013473]
83. Goutman S, Guo K, Savelieff M, Patterson A, Sakowski S, Habra H, Karnovsky A, Hur J, Feldman EL. Metabolomics identifies shared lipid pathways in independent amyotrophic lateral sclerosis cohorts. *Brain*. 2022 Jan 28;awac025. doi: 10.1093/brain/awac025. [PMID: 35088843]
84. Li L, Niu M, Erickson A, Luo J, Rowbotham K, Guo K, Huang H, Li Y, Jiang Yi, Hur J, Liu C, Peng J, Wang X. SMAP: A pipeline for sample matching in proteogenomics. *Nature Communications*. 2022 Feb 8;13(1):744. doi: 10.1038/s41467-022-28411-8. [PMID: 35136070]
85. Raihan MDO, Espelien B, McGregor BA, Hanson C, Brishti A, Velaris NA, Alvin TD, Bradley DS, Niles M, Glovko M, Hur J, and Porter JE. Modulation of inflammatory signaling molecules in Bordetella pertussis antigen challenged human monocytes in presence of adrenergic agonists. *Vaccines*. 2022 Feb 17;10(2):321. doi: 10.3390/vaccines10020321. [PMID: 35214778]
86. Schmit T, Guo K, Tripathi JK, Wang Zhihan, McGregor B, Klomp M, Ambigapathy G, Mathur R, Hur J, Pichichero M, Kills J, and Khan N. Interferon (IFN)- $\gamma$  promotes monocyte-mediated lung injury during influenza pathogenesis. *Cell Reports*. 2022 Mar 1;38(9):110456. doi: 10.1016/j.celrep.2022.110456. [PMID: 35235782]
87. Larson KJ, Bundy AN, Kuntz T, Hur J, Yeater KM, Casperson S, and Roemmich JN. Effect of a maternal high fat diet with vegetable substitution on fetal brain transcriptome. *The Journal of Nutritional Biochemistry*. 2022 Oct;108:109088. doi: 10.1016/j.jnutbio.2022.109088. Epub 2022 Jun 10. [PMID: 35691591]
88. Rumora AE, Guo K, Hinder LM, Elzinga SE, O'Brien PD, Hayes JM, Tabbey MA, Hur J, and Feldman EL. A High-Fat Diet Disrupts Nerve Lipids and Mitochondrial Function in Murine Models of Neuropathy. *Frontiers in Physiology Lipid and Fatty Acid Research*. 2022 Aug 22;13:921942. doi: 10.3389/fphys.2022.921942. eCollection 2022. [PMID: 36072849] [PMCID: PMC9441493]
89. Raihan MDO, Espelien B, Hanson C, McGregor BA, Brishti A, Velaris NA, Alvin TD, Bradley DS, Niles M, Glovko M, Hur J, and Porter JE. Characterization of prostanoids response to Bordetella pertussis antigen BscF and Tdap in LPS-challenged monocytes. *PLEFA (Prostaglandins, Leukotrienes & Essential Fatty Acids)* 2022 Jul;182:102452. doi: 10.1016/j.plefa.2022.102452. Epub 2022 May 21. [PMID: 35690004]
90. He Y, Yu H, Huffman A, Lin AY, ..., Hur J, Omenn GS, Athey B, and Smith B. A comprehensive update on CIDO: the community-based coronavirus infectious disease ontology. *Journal of Biomedical Semantics*. 2022 Oct 21;13(1):25. doi: 10.1186/s13326-022-00279-z. [PMID: 36271389] [PMCID: PMC9585694]
91. Guo K<sup>S</sup>, Yombo D, Schmit T, Wang Z, Ghosh S, Sathish V, Mathur R, Wu M, Hur J<sup>S</sup>, and Khan N<sup>S</sup>. Cellular heterogeneity and molecular reprogramming of host response during influenza acute lung injury. *Journal of Virology*. 2022 Nov 9;96(21):e0124622. doi: 10.1128/jvi.01246-22. Epub 2022 Oct 26. [PMID: 36286482] [PMCID: PMC9645213]
92. Hur J\*, Paez-Colasante X\*, Figueroa-Romero C\*, Lo TW, Barmada SJ, Paulsen M, Ljungman M, Alakwaa FM, Savelieff MG, Goutman SA, and Feldman EL. miRNA analysis reveals novel dysregulated pathways in amyotrophic lateral sclerosis. *Human Molecular Genetics*. 2022 Oct 11;ddac250. doi: 10.1093/hmg/ddac250. Online ahead of print. [PMID: 36219176]
93. Yu H\*, Li L\*, Huffman A\*, Beverley J\*, Hur J\*, Merrell E, Huang HH, Wang Y, Liu Y, Ong E, Cheng L, Zeng T, Zhang J, Li P, Liu Z, Wang Z, Zhang X, Ye X, Handelman SK, Sexton J, Eaton K, Higgins G, Omenn GS, Athey B, Smith B, Chen L, He Y. A New Framework for Host-Pathogen Interaction Research. *Frontiers in Immunology*. 2022 Dec 15;13:1066733. doi: 10.3389/fimmu.2022.1066733. eCollection 2022. [PMID: 36591248] [PMCID: PMC9797517]
94. Henn R, Elzinga S, Glass E, Parent R, Guo K, Allouch A, Mendelson F, Hayes J, Webber-Davis I, Murphy G, Hur J, and Feldman EL. Obesity-Induced Neuroinflammation and Cognitive Impairment in Adult versus Aged Mice. *Immunity & Ageing*. 2022 Dec 22;19(1):67. doi: 10.1186/s12979-022-00323-7. [PMID: 36550567] [PMCID: PMC9773607]

95. Henn RE, Guo K, Elzinga SE, Noureldein M, Mendelson FE, Hayes JM, Rigan DM, Savelieff MG, [Hur J](#), Feldman EL. Single-cell RNA sequencing identifies hippocampal microglial dysregulation in diet-induced obesity. *iScience*. Feb 8;26(3):106164. doi: 10.1016/j.isci.2023.106164. eCollection 2023 Mar 17. [PMID: [36915697](#)] [PMCID: [PMC10006681](#)]
96. Guo K, Figueroa-Romero Claudia, Hinder LM, Noureldein M, Sakowski SA, Rumora AE, Petit H, Savelieff MG, [Hur J](#), and Feldman EL. Gut microbiota in a mouse model of obesity and peripheral neuropathy associated with plasma and nerve lipidomics and nerve transcriptomics. *Microbiome*. Mar 15;11(1):52. doi: 10.1186/s40168-022-01436-3. [PMID: [36922895](#)] [PMCID: [PMC10015923](#)]
97. Dou JF, Bakulski KM, Guo K, [Hur J](#), ..., and Goutman SA. Cumulative genetic score and C9orf72 repeat status independently contribute to ALS risk in two case-control studies. *Neurology Genetics*. 2023 May 31;9(4):e200079. doi: 10.1212/NXG.000000000200079. eCollection 2023 Aug. [PMID: [37293291](#)] [PMCID: [PMC10245939](#)]
98. Talukdar S, McGregor B, Osan J, [Hur J](#), and Mehedi M. Respiratory Syncytial Virus Infection Does Not Induce Epithelial-Mesenchymal Transition. *Journal of Virology*. 2023 Jul 27;97(7):e0039423. doi: 10.1128/jvi.00394-23. Epub 2023 Jun 20. [PMID: [37338373](#)] [PMCID: [PMC10373540](#)]
99. McGregor BA, Razmjou E, Hooshyar H, Seeger DR, Golovko SA, Eckmann L, Golovko MY, Singer SM, [Hur J](#), and Solaymani-Mohammadi S. A shotgun metagenomic analysis of the fecal microbiome in humans infected with *Giardia duodenalis*. *Parasites & Vectors*. 2023 Jul 18;16(1):239. doi: 10.1186/s13071-023-05821-1. PMID: [\[37464386\]](#) PMCID: [\[PMC10354925\]](#)
100. Eid EA, Noureldein M, Kim B, Hinder LM, Mendelson FE, Hayes JM, [Hur J](#), Feldman EL. Single-cell RNA-seq uncovers novel metabolic functions of Schwann cells beyond myelination. *Journal of Neurochemistry*. 2023 Jul;166(2):367-388. doi: 10.1111/jnc.15877. Epub 2023 Jun 16. [PMID: [37328915](#)]
101. Elzinga SE\*, Eid SA\*, McGregor BA\*, Hinder LM, Dauch JR, Hayes JM, Pennathur S, Kretzler M, Brosius FC, Feldman EL, and [Hur J](#)<sup>§</sup>. Transcriptomic analysis of diabetic kidney disease and neuropathy in mouse models of type 1 and type 2 diabetes. *Disease Models and Mechanisms*. 2023 Oct 1;16(10):dmm050080. doi: 10.1242/dmm.050080. [PMID: [37791586](#)] [PMCID: [PMC10565109](#)]
102. Combs P, Erickson J, Hsieh JH, Guo K, Nolte S, Schmitt C, Auerbach S\*, [Hur J](#)\*. Tox21Enricher-Shiny: An R Shiny Application for Toxicity Functional Annotation Analysis. *Frontiers in Toxicology*. 2023 Jun 27;5:1147608. doi: 10.3389/ftox.2023.1147608. eCollection 2023. [PMID: [37441091](#)] [PMCID: [PMC10333489](#)]
103. Choi IY, Wang WT, Kim B, [Hur J](#), Robbins DC, Jang DG, Savelieff MG, Feldman EL, Lee P. Non-invasive in vivo measurements of metabolic alterations in the type 2 diabetic brain by 1H magnetic resonance spectroscopy. *Journal of Neurochemistry*. 2023 Nov 15. doi: 10.1111/jnc.15996. [PMID: [37965761](#)]
104. Guo K, Figueroa-Romero, Noureldein MH, Murdock BJ, Savelieff MG, [Hur J](#), Goutman SA, and Feldman EL. Gut microbiome correlates with plasma lipids in amyotrophic lateral sclerosis. *Brain*. 2023 Sep 18:awad306. doi: 10.1093/brain/awad306. Online ahead of print. [PMID: [37721161](#)]
105. Navaeiseddighi Z, Tripathi JK, Guo K, Wang Z, Schmit T, Navaeiseddighi Z, [Hur J](#), Mathur R, Jurivich D, and Khan N. IL-17RA promotes pathologic epithelial inflammation in a mouse model of upper respiratory influenza infection. *PLOS Pathogens*. 2023 Dec 7;19(12):e1011847. doi: 10.1371/journal.ppat.1011847. eCollection 2023 Dec. [PMID: [38060620](#)] [PMCID: [PMC10729944](#)]
106. Guo K, Yombo DJK, Wang Z, Navaeiseddighi Z, Xu J, Schmit T, Ahamad N, Tripathi J, De Kumar B, Mathur R, [Hur J](#), Sun J, Olszewski M, and Khan N. The chemokine receptor CXCR3 promotes CD8+ T cell-dependent lung pathology during influenza pathogenesis. *Science Advances*. 2024 Jan 5;10(1):eadj1120. doi: 10.1126/sciadv.adj1120. Epub 2024 Jan 3. [PMID: [38170765](#)] [PMCID: [PMC10776024](#)]
107. You JH\*, [Hur J](#)\*, Jurivich D, You JT, Lee KJ. A novel approach to quantifying individual's biological aging using Korea's national health screening program toward precision public health. *GeroScience*. Geroscience. 2024 Feb 2. doi: 10.1007/s11357-024-01079-2 [PMID: [38302843](#)]
108. Wang Z, Gao P, Guo K, Shirrick G, Gill JS, Weis J, Da Costa AL, Rahman M, Mehta H, Fleecs J, Jain S, Debnath T, [Hur J](#), Khan N, Sticca R, Brown-Borg H, Jurivich DA, and Mathur R. Age-related dysregulation of intestinal epithelium fucosylation is linked to an increased risk of colon cancer. *JCI Insights*. <https://doi.org/10.1172/jci.insight.167676>. 2024 Mar 8;9(5):e167676. [PMID: [38456503](#)]

109. Eid SA\*, Elzinga SE\*, Guo K\*, Hinder LM, Hayes JM, Pacut CM, Koubek EJ, Hur J<sup>S</sup>, and Feldman EL<sup>S</sup>. Transcriptomic profiling of sciatic nerves and dorsal root ganglia reveals site-specific effects of prediabetic neuropathy. *Translational Research*. 2024 Mar 29;270:24-41. doi: 10.1016/j.trsl.2024.03.009. [PMID: [38556110](#)]
110. Gill JS, Bansal B, Guo K, Huang F, Singh H, Hur J, Khan N, and Mathur R. Mitochondrial oxidative stress regulates FOXP3+ T cell activity and CD4-mediated inflammation in frail older adults. *International Journal of Molecular Sciences*. 2024 Jun 5;25(11):6235. doi: 10.3390/ijms25116235. [PMID: [38892421](#)]
111. Rehana H\*, Çam NB\*, Masmaci M, Zheng J, Jemiyo C, He Y, Ozgur A<sup>S</sup>, and Hur J<sup>S</sup>. Evaluation of GPT and BERT-based models on identifying protein-protein interactions in biomedical text. *Bioinformatics Advances*. 2024 Sep 11;4(1):vbae133. doi: 10.1093/bioadv/vbae133. eCollection 2024. [PMID: [39319026](#)]
112. Hasan Al.R.O, Tasnim F.O., Aktaruzzman M.O., Islan M.T.O, Rayhan R.O., Brishti A.O., Hur J, Porter J.E., Raihan MO. The Role of Microglial Calcium Homeostasis in Central Nervous System Disorders: A Comprehensive Review. *Neuroglia*. <https://doi.org/10.3390/neuroglia5040027> [Full text]
113. Bergquist T, Loomba J, ..., Blasé J; **Long COVID Computational Challenge Participants**; N3C Consortium. *EBioMedicine*. 2024 Oct;108:105333. doi: 10.1016/j.ebiom.2024.105333. Epub 2024 Sep 24. [PMID: [39321500](#)] (Note: as a challenge participant)
114. Zhang K<sup>S</sup>, Dang Y, Li Y, Tao C<sup>S</sup>, Hur J<sup>S</sup>, and He Y<sup>S</sup>. Impact of Climate Change on Vaccine Responses and Inequity. *Nature Climate Change*. 14, 1216–1218 (2024). <https://doi.org/10.1038/s41558-024-02192-y>
115. Guo K, Savelieff MG, Jang DG, Teener SJ, Zhao L, Hur J, Goutman SA<sup>S</sup>, and Feldman EL<sup>S</sup>. Longitudinal metabolomics in amyotrophic lateral sclerosis implicates impaired lipid metabolism. *Annals of Neurology*. 2025 Feb 20. doi: 10.1002/ana.27208. [PMID: [39976286](#)]
116. McGregor BA\*, Raihan MDO\*, Brishti A, Hur J<sup>S</sup>, and Porter J<sup>S</sup>. Deciphering Motor Dysfunction and Microglial Activation in mThy1- $\alpha$ -Synuclein Mice: A Comprehensive Study of Behavioral, Gene Expression, and Methylation Changes. *Frontiers in Neuroscience*. 2025 Feb 13;18:1544971. doi: 10.3389/fnmol.2025.1544971. eCollection 2025. [PMID: [39976286](#)]
117. Elzinga S, Guo K, Turfah A, Henn RE, Webber-Davis IF, Hayes JM, Pacut CM, Teener SJ, Carter AD, Rigan DM, Allouch AM, Jang DG, Parent R, Glass E, Murphy GG, Lentz SI, Chen KS, Zhao L, Hur J, and Feldman EL. Metabolic stress and age drive inflammation and cognitive decline in mice and humans. *Alzheimer's & Dementia*. (under major revision deadline 12/31/2024; **accepted for publication on 1/31/2025**)

#### Reviews or Editorial – Peer-reviewed

1. Lunn JS, Sakowski SA, Hur J, Feldman EL. Stem cell technology for neurodegenerative diseases, *Annals of Neurology*, 2011, DOI:10.1002/ana.22487 [PMID: [21905078](#)]
2. Callaghan BC, Hur J, and Feldman EF. Diabetic Neuropathy: One disease or two?, *Current Opinions in Neurology*, 2012, 25:536-541 [PMID: [22892951](#)]
3. Sakellaropoulos T, Hur J, Melas IN, Guo EY, Alexopoulos L, and Bai JPF. Computational Approaches to Accelerating Novel Medicine and Better Patient Care from Bedside to Benchtop. *Advances In Protein Chemistry And Structural Biology*. 102, 147-179, doi:10.1016/bs.apcsb.2015.09.005 (2016). [PMID: [26827605](#)]
4. Bai JPF, Melas IN, Hur J, and Ellen YG. Advances in omics for informed pharmaceutical R&D. *Expert Opinion on Drug Discovery*. 2018 Jan;13(1):1-4. doi: 10.1080/17460441.2018.1394839. Epub 2017 Oct 27. [PMID: [29073782](#)]
5. Huffman A, Ong E, Hur J, D'Mello A, Tettelin H, He Y. COVID-19 vaccine design using reverse and structural vaccinology, ontology-based literature mining and machine learning. *Brief Bioinform*. 2022 Jul 18;23(4):bbac190. doi: 10.1093/bib/bbac190. [PMID: [35649389](#)] [PMCID: [PMC9294427](#)]
6. Eid SA, Rumora AE, Beirowski B, Bennett DL, Hur J, Savelieff MG, and Feldman EL. New perspective in diabetic neuropathy. *Neuron*. 2023 May 19;S0896-6273(23)00345-8. doi: 10.1016/j.neuron.2023.05.003. [PMID: [37263266](#)]
7. Goutman SA, Savelieff MG, Jang DG, Hur J, and Feldman EL. The amyotrophic lateral sclerosis exposome: recent advances and future directions. *Nature Reviews Neurology*. 2023 Oct;19(10):617-634. doi: 10.1038/s41582-023-00867-2. [PMID: [37709948](#)]

Editorial – Not-peer reviewed

1. Hur J<sup>S</sup>, Tao C, and He Y. A 2018 workshop: vaccine and drug ontology studies (VDOS 2018). *BMC Bioinformatics*. 2019 Dec 23;20(Suppl 21):705. [PMID: [31865905](#)]

Book Editing

1. Bai JPF and Hur J. Systems Medicine. *Methods in Molecular Biology*. Springer. April 5<sup>th</sup>, 2022.

Book chapter

1. Melas IN, Sakellaropoulos T, Hur J, Messinis D, Guo EY, Alexopoulos LG, and Bai J.P.F., A computational platform and guide for acceleration of novel medicine and precision medicine. *Methods in Molecular Biology*. *Bioinformatics in Drug Discovery* 3rd edition. 2019 Edited by Richard S Larson and Tudor I Oprea. [PMID: [30848462](#)]

Conference Proceedings – Peer-reviewed

1. Özgür A, Hur J<sup>S</sup>, and He Y<sup>S</sup>. Extension of the Interaction Network Ontology for literature mining of gene-gene interaction networks from sentences with multiple interaction keywords. *The Proceedings of the International Workshop on Biomedical Data Mining, Modeling, and Semantic Integration: A Promising Approach to Solving Unmet Medical Needs (BDM21 2015)*. Bethlehem, PA, USA. [Full text]
2. Guo A, Racz R, Hur J, Lin Y, Xiang Z, Zhao L, Jiang G, Zhu Q, Bai J, and He Y. Ontology-based collection, representation and analysis of drug-associated neuropathy adverse events. *The proceedings of the International Conference of Biological Ontologies (ICBO) 2015 Vaccines and Drug Ontology Studies (VDOS) workshop*. [Full text]
3. Hur J<sup>S</sup>, Ozgur A, Ong E, and He Y<sup>S</sup>. Ontology-based literature mining of E. coli vaccine-associated gene interaction networks. *The proceedings of the International Conference of Biological Ontologies (ICBO) 2016 Vaccines and Drug Ontology Studies (VDOS) workshop*.
4. Hur J<sup>S</sup>, Ozgur A, and He Y. Ontology-based NLP literature mining and analysis of adverse drug reactions associated with neuropathy-inducing drugs. *The proceedings of the International Conference of Biological Ontologies (ICBO) 2017 Vaccines and Drug Ontology Studies (VDOS) workshop*.
5. Tiftikci M, Ozgur A, He Y, and Hur J<sup>S</sup>. Machine learning-based identification and rule-based normalization of adverse drug reactions in drug labels. *The proceedings of the International Conference of Biological Ontologies (ICBO) 2018 Vaccines and Drug Ontology Studies (VDOS) workshop*.
6. Hur J, Ozgur A, Ong E, Xiang Z, and He Y<sup>S</sup>. Iagnet: A centrality- and ontology-based gene interaction network analysis system and its usage in vaccine-associated gene interaction study. *The proceedings of the International Conference of Biological Ontologies (ICBO) 2019 Vaccines and Drug Ontology Studies workshop (VDOS-2019)*.
7. Liu Y, Chan KBW, Wang Z, Hur J, Xie J, Sun D, Handelman S, Sexton J, Yu H, and He Y. Development of the International Classification of Diseases Ontology (ICDO) and its application for COVID-19 diagnostic data analysis. *The 19<sup>th</sup> International Conference on Bioinformatics*. Virtual. November 25-29, 2020.
8. Hur J, Huffman A, Basmaci M, Ong E, Ozgur A, and He Y. Literature-derived host-coronavirus gene-gene interaction network of SARS-CoV-2. *The proceedings of the 11th International Conference of Biological Ontologies (ICBO) 2020 Vaccines and Drug Ontology Studies workshop (VDOS-2020)*. September 16 – 19, 2020. Virtual.
9. Basmaci M, He Y, Hur J<sup>S</sup>, and Ozgur A<sup>S</sup>. BioBERT model for protein-protein interaction extraction from biomedical text with a COVID-19 case study. *The proceedings of the 12<sup>th</sup> International Conference of Biological Ontologies (ICBO) 2021 Vaccines and Drug Ontology Studies workshop (VDOS-2021)*.
10. Adeluwa T, Kim E, Hur J. GBMPSO: Hybrid Gradient Boosting Machines with Particle Swarm Optimization in Cell Segmentation Data. *IEEE Symposium Series on Computational Intelligence (SSCI) (SSCI 2021)*. December 5-7, 2021. Orlando Florida USA
11. Basmaci M, He Y, Hur J<sup>S</sup>, and Ozgur A<sup>S</sup>. Application of Interaction Network Ontology with BioBERT model to identifying protein-protein interactions from biomedical text. *The proceedings of the 13<sup>th</sup> International*

**Conference of Biological Ontologies (ICBO) 2022 Vaccines and Drug Ontology Studies workshop (VDOS-2022)**. September 26, 2022. Ann Arbor, MI, USA.

12. He Y, Yu H, Huffman A, Lin AY, Natale DA, Beverley J, Zheng L, Perl Y, Wang Z, Liu Y, Ong E, Wang Y, Huang P, Tran L, Du J, Shah Z, Shah E, Desai R, Huang HH, Tian Y, Merrell E, Duncan WD, Arabandi S, Schriml LM, Zheng J, Masci AM, Wang L, Liu H, Smaili FZ, Hoehndorf R, Pendlington ZM, Roncaglia P, Ye X, Xie J, Tang YW, Yang X, Peng S, Zhang L, Chen L, Hur J, Omenn GS, Athey B, and Smith B. A Comprehensive Update on CIDO: The Community-based Coronavirus Infectious Disease Ontology. **The proceedings of the 13<sup>th</sup> International Conference on Biomedical Ontologies (ICBO-2022)**. September 25-28, 2022. Ann Arbor, MI, USA.
13. Hasin R\*, Bansal B\*, Çam NB, Zheng J, He Y, Özgür A, and Hur J. Nested named entity recognition using multilayer BERT-based model. **The Proceedings of the Conference and Labs of the Evaluation Forum (CLEF) 2024**. BioASQ Lab. September 9-12, 2024. Grenoble, France. (<https://ceur-ws.org/Vol-3740/paper-18.pdf>)

#### Conference Proceedings – Not peer-reviewed

1. Tiftikci M, He Y, Ozgur A, and Hur J<sup>S</sup>. Extracting adverse drug reactions using deep learning- and dictionary-based literature mining approaches. **Proceedings of Text Analysis Conference 2017**. [Full text]
2. Rehana H, Zheng J, He Y, and Hur J. ChatGPT to identify Drug-Drug Interactions from Biomedical Texts. **The proceedings of the 14th International Conference of Biological Ontologies (ICBO) 2023 Vaccines and Drug Ontology Studies workshop (VDOS-2023)**. August 28-September 1, 2023. Brasilia, Brazil.
3. Çam NB\*, Rehana H\*, Zheng J, Bansal B, He Y, Hur J<sup>S</sup>, and Ozgur A<sup>S</sup>. Ontology-based protein-protein interaction explanation using large language models. **The 13th Vaccines and Drug Ontology Studies workshop (VDOS-2024)**. July 22, 2024. University Twente, Enschede, The Netherlands. (VDOS was virtual)
4. Rehana H, He Y, and Hur J<sup>S</sup>. Cancer Vaccine Adjuvant Name Recognition from Clinical Trial Data using Large Language Models. **The 13th Vaccines and Drug Ontology Studies workshop (VDOS-2024)**. July 22, 2024. University Twente, Enschede, The Netherlands. (VDOS was virtual)

#### Preprint (BioRxived) – Not peer-reviewed

1. de Anda-Jáuregui G, Espinal-Enriquez J, Hur J, Alcalá-Corona SA, Ruiz-Azuara L, and Hernandez-Lemus E. Identification of Casiopeina II-gly secondary targets through a systems pharmacology approach. **bioRxiv**, 2018. doi: <https://doi.org/10.1101/327718> <https://www.biorxiv.org/content/early/2018/05/21/327718>
2. Liu Y, Chan W, Wang Z, Hur J, Xie J, Yu H, and He Y. Ontological and bioinformatic analysis of anti-coronavirus drugs and their implication for drug repurposing against COVID-19. **Preprints** 2020, 2020030413 (doi: 10.20944/preprints202003.0413.v1).
3. Wang Z, Guo K, Gao P, Pu Q, Wu M<sup>S</sup>, Huang C<sup>S</sup>, and Hur J<sup>S</sup>. Identification of Repurposal Drugs and Adverse Drug Reactions for Various Courses of COVID-19 Based on Single-cell RNA Sequencing Data. **arXiv**. <https://arxiv.org/abs/2005.07856>
4. Guo K<sup>S</sup>, Yombo D, Schmit T, Wang Z, Ghosh S, Sathish V, Mathur R, Wu M, Hur J<sup>S</sup>, and Khan N<sup>S</sup>. Cellular heterogeneity and molecular reprogramming of host response during influenza acute lung injury. **bioRxiv**. <https://www.biorxiv.org/content/10.1101/2021.08.05.455152v1>
5. Dou JF, Bakulski KM, Guo K, Hur J, ..., and Goutman SA. Cumulative genetic risk and C9orf72 repeat status independently associate with ALS status in two case-control studies. medRxiv. <https://www.medrxiv.org/content/10.1101/2022.10.27.22281377v1>
6. Rehana H\*, Çam NB\*, Masmaci M, Zheng J, Jemiyo C, He Y, Ozgur A<sup>S</sup>, and Hur J<sup>S</sup>. Evaluation of GPT and BERT-based models on identifying protein-protein interactions in biomedical text. **arXiv**. <https://doi.org/10.48550/arXiv.2303.17728>

#### Manuscripts currently under peer review or in revision

1. Guo K, Wang Z, Gill JS, Debnath T, Poojary R, Bansal B, Mehta H, Abrham E, Even Z, Rahman M, Da Costa AL, Jain S, Wang X, Murugaiyan G, Ting AT, Hur J, Khan N, Brown-Borg H, Jurivich DA, Mathur R. Mitochondrial transcription factor A regulates Foxp3+ T cell-mediated maintenance of CD4+ T cell

- landscapes and immunological aging. doi: <https://doi.org/10.1101/2022.03.08.483517>. *Nature Aging*. (In revision after initial review)
- Liu X\*, Huang F\*, He Y, Zhang H, Hur J, Wang J, Xian Y, Yin B, Lei T, Li X, Zhu D, Guo K<sup>S</sup>, and Zhou X<sup>S</sup>. Exploring immunological dysregulation and addressing treatment obstacles in adolescent depression through multiomics profiling. *Journal of Advanced Research*. (Submitted on 9/20/2024)
  - Chen K, Noureldein MH, Rigan D, Hayes J, Loi KJ, Hur J, Savelieff MG, and Feldman EL. Interneuron transcriptomics reveals pathologic markers of disease progression in Alzheimer's disease brain. *Neurobiology of Disease* (submitted on 11/18/2024) *Alzheimer's & Dementia*. (Initially submitted on 9/20/2024).
  - Jemiyo C\*, McGregor BA\*, Rehana H, and Hur J. Exploration of adverse childhood experiences in the United States using BRFSS data (2019-2023): Associations with chronic health outcomes. *BMC Public Health* (Submitted on 12/23/2024; a revision requested on 3/11/2025)
  - Purnell B\*, Hur J\*, Fedele D, Ruskin D, Murugan M, Tescarollo F, Singh R, Ramavenkat N, Masino S, Geiger J, Boison D. Commonalities in gene expression and methylation changes across two rat models of acquired epilepsy. *Scientific Reports*. (Submitted on 1/23/2025)
  - Rehana H, Zheng J, Yeh L, Bansal B, Çam NB, Jemiyo C, McGregor B, Özgür A, He Y, and Hur J. Cancer Vaccine Adjuvant Name Recognition from Biomedical Literature using Large Language Models, The proceedings of the 33<sup>rd</sup> Conference on *Intelligent Systems for Molecular Biology* (ISMB). (Submitted on 01/23/2025).
  - Liu X, Geng A, Xia M, Lan J, Wu H, Zhou Z, Huang F, He Y, Lei T, Hur J, Guo K, Yu X. Alterations in Short-Chain Fatty Acid-Associated Gut Microbiota and Tight Junction Integrity Predict Clinical Outcomes in Adolescent Major Depressive Disorder. *Translational Psychiatry* (Submitted on 01/25/2025)
  - Zhao Y, Li X, Savelieff MG, Guo K, Wang K, Li B, Iyer G, Sakowski SA, Zhao L, Teener SJ, Bakulski KM, Dou JF, Traynor BJ, Karnovsky A, Batterman SA, Hur J, Goutman SA, Sartor MA, Feldman EL. Gene Expression Signatures from Whole Blood Predict Amyotrophic Lateral Sclerosis Case Status and Survival. *Nature Communication*. (Submitted on 2/27/2025)
  - Lee SY, Kim MY, Kim JH, Park SJ, Hur J, Shin DY. Metabolomics and Nutrient Intake Reveal Metabolite–Nutrient Interactions in Metabolic Syndrome: Insights from the Korean Genome and Epidemiology Study. *Nutrition Journal* (Submitted on 03/09/2025)

#### Manuscript in preparation

- Wang Z, Schmit T, Guo K, Tripathi JK, Navaeiseddighi Z, Tyagi A, Mathur R, Hur J, Jurivich D, and Khan N<sup>S</sup>. Loss of pulmonary tissue protection and neutrophil microbicidal defects promote severe *Aspergillus fumigatus* infection during influenza A virus infection. *PLOS Pathogen* (submitted on 9/3/2024; rejected on 10/7/2024; in preparation for resubmission to a different journal)
- Çam NB\*, Rehana H\*, Zheng J, Bansal B, He Y, Hur J<sup>S</sup>, and Özgür A<sup>S</sup>. Ontology-based protein-protein interaction explanation using large language models. (Submitted on 8/16/2024 for IEEE BIBM 2024; rejected on 10/14/2024; being revised for a journal submission)
- Eid SA, Guo K, Noureldein M, Jaisail P, Allouch AM, Miller C, Hayes JM, Pacut CM, Rigan D, Carter A, Teener S, Savelieff MG, Hur J<sup>S</sup>, and Feldman EL<sup>S</sup>. Single-cell RNA Sequencing Deconvolutes Cellular and Molecular Responses to Diet and Exercise in Prediabetic Neuropathy. *Diabetes* (In preparation)
- Bansal B, Guo K, Alam M, Goswami A, Singh J, Hynes J, Wang Z, Ting A, Alexander W, Jurivich D, Hur J<sup>S</sup>, Mathur R<sup>S</sup>. Mitochondrial Dysfunction in Microglia Impairs Microglia-Neuron Crosstalk, Inducing RNA Dysregulation and Motor Neuron Dysfunction. (In Preparation for *Nature Communications*).
- Huang F, Hu DY, Guan RX, Quan H, Wang ZH, Zhang JH, Nadeem K, Hur J, Zhang HS, Guo K. Gene-aware Embedded Network via Hard-sample Mining for Single-cell RNA-seq Data. (In Preparation for *Nature Methods*)
- Jaisil P, Eid SA, Guo K, Savelieff MG, Jang DG, Kim B, Pacut C, Hayes JM, Rigan DM, Carter A, Teener SJ, McQuown H, Webber-Davis IF, Hur J, Meyer JD, and Feldman EL. Dietary and exercise interventions improve cognition and alter hippocampal transcriptome in a mouse model of metabolic syndrome. (In Preparation for *Diabetes*)

7. Jaisil P, Eid SA, Guo K, Hayes JM, Pacut C, Kim B, Rigan DM, Carter A, Teener SJ, Kiriluk C, Davis IW, McQuown H, Koubek EJ, Hur J, Meyer JD, Feldman EL. Ketogenic diet and voluntary exercise alter nerve and muscle transcriptome profiles in diet-induced obese mice. (In Preparation for **Diabetes**)
8. Jemiyo C, Dawn D, Lindseth G, Afghah Z, Becker J, Downs Z, Johnson M, Jurivich D, and Hur J. Polypharmacy as the risk factor of the elderly falls. (In preparation for **GeroScience**)
9. Guo K, McGregor BA, Porter JE, and Hur J<sup>S</sup>. VennDetail: a Bioconductor package for visualizing and extracting details of multi-sets intersection. **BMC Bioinformatics** (In preparation for resubmission to a different journal)
10. Celik H, Bansal B, Gill JS, Celik V, Correa JK, Herman K, Goyal R, Tavakolian K, Hur J, and Mathur R. Machine Learning Identifies Age-Stratified Transcriptomic Reprogramming, Uncovering Therapeutic, Immune, and Glycosylation Signatures for Precision Therapy in Colorectal Cancer. (In preparation for **BMC Genomics**)

## Presentations

### Invited or contributed talks (Oral)

1. Differential location analysis: a novel approach to detecting cellular responses to environmental changes. Center for Genomics and Bioinformatics Round Table, Indiana University. January 26, 2006. Bloomington, Indiana (Invited; Local)
2. Defining reactive oxidant genes in diabetes mellitus. Tools and Technology Seminar, University of Michigan. February 01, 2007. Ann Arbor, Michigan (Invited; Local)
3. Integration of Text Mining with Systems Biology Provides New Insight into the Pathogenesis of Diabetic Neuropathy. Department of Neurology Research Seminar, University of Michigan, March 17, 2011, Ann Arbor, Michigan (Invited; Local)
4. The identification of gene expression profiles predictive of human diabetic neuropathy. Peripheral Nerve Society Biennial Meeting. June 25-29, 2011. Potomac, Maryland (Contributed; International)
5. Ontology-based Enrichment Analysis of Gene-Gene Interaction Terms and Application on Literature-derived IFN- $\gamma$  network. International Conference on Intelligent Systems for Molecular Biology – Bio-Ontologies Special Interest Group, July 14, 2012. Long Beach, California (Contributed; International)
6. Informatics tools for interacting with literature and chemical databases to build pharmacological networks of drug-induced neuropathy. 246th American Chemical Society National Meeting and Exposition. Graduate Student Research Symposium in Cheminformatics, Information Science, and Library Science. Sep 8, 2013. Indianapolis, Indiana (Invited; National)
7. Bioinformatics leads to potential therapeutic targets in ALS. Mayo Clinic Department of Neuroscience Seminar Series. December 20, 2013. Jacksonville, Florida. (Invited; Regional)
8. Glucose and Triglyceride Control Prevents Small but not Large Fiber Diabetic Neuropathy in a Murine Model of Type 2 Diabetes. American Diabetes Association 74th Scientific Sessions, June 13-17, 2014. San Francisco, California (Contributed; National)
9. Bioinformatics approaches for understanding the disease mechanisms of diabetic neuropathy and amyotrophic lateral sclerosis. Department of Basic Science, School of Medicine and Health Sciences, University of North Dakota. August 28, 2014. Grand Forks, North Dakota (Invited; Local)
10. Transcriptional networks of murine diabetic neuropathy and nephropathy: Common and distinct gene expression patterns. American Diabetes Association 75th Scientific Sessions, June 5-9, 2015. Boston, Massachusetts (Contributed; National)
11. Ontology-based literature mining of E. coli vaccine-associated gene interaction networks. The International Conference of Biological Ontologies (ICBO) 2016 Vaccines and Drug Ontology Studies (VDOS) workshop. August 1-4, 2016. Corvallis, Oregon. (Contributed; International).
12. Iagnet: A centrality and INO-based web system for analyzing and visualizing literature-mined networks. International Conference of Biological Ontologies (ICBO) & BioCreative 2016. August 1-4, 2016. Corvallis, Oregon. (Contributed talk; International; Flash oral talk & Poster)
13. Ontology-based NLP literature mining and analysis of adverse drug reactions associated with neuropathy-inducing drugs. International Conference of Biological Ontologies (ICBO) 2017 Vaccines and Drug Ontology

- Studies (VDOS) workshop. September 13-15, 2017. Newcastle Upon Tyne, United Kingdom. (Contributed talk; International)
14. Diabetic Peripheral Neuropathy Knowledge-Base (DPNKB), an integrated web-based exploration and analysis platform for diabetic peripheral neuropathy gene expression data. University of Michigan, Department of Neurology. October 27, 2017. Ann Arbor, Michigan. (Invited talk; Local)
  15. Integration of machine learning- and dictionary-based approach for identification of adverse drug reactions in drug labels. Text Analysis Conference (TAC) 2017. November 13-14. National Institute of Standards and Technology (NIST), Gaithersburg, MD. (Contributed talk; National)
  16. Computational approaches for elucidating the pathogenic mechanisms of diabetic peripheral neuropathy and identifying small-molecule drugs for its treatment. Chonnam National University, School of Biological Sciences and Technology. March 28, 2018. Gwangju, Korea. (Invited talk; Local)
  17. Systems biology for diabetic peripheral neuropathy research. United Tribes Technical College, Department of Environmental Sciences and Research. March 22, 2019. Bismarck, ND. (Invited talk; Regional)
  18. Alpha-synuclein-mediated epigenomic modification of microglial neuroinflammation in Parkinson's disease. 2019 IDEa Central Region Conference. June 12-14, 2019. Oklahoma City, OK (Invited talk; Regional)
  19. Iagnet: A centrality- and ontology-based gene interaction network analysis system and its usage in vaccine-associated gene interaction study. The 8th International Workshop on Vaccine and Drug Ontology Studies (VDOS-2019). July 30-August 2, 2019. Buffalo, NY (Contributed talk; International)
  20. Gene expression signature-based machine learning classifier of drug-induced liver injury. Critical Assessment of Massive Data Analysis (CAMDA) – CMap Drug Safety Challenge. 28<sup>th</sup> Intelligent Systems for Molecular Biology conference. July 13, 2020. (Contributed talk; International)
  21. Host-coronavirus gene-gene interaction network of SARS-CoV-2 derived from biomedical literature. The 9th International Workshop on Vaccine and Drug Ontology Studies (VDOS-2020). September 19, 2020. Virtual (Contributed talk; International)
  22. Bioinformatics approaches for finding cures for diabetic peripheral neuropathy. March 11, 2022. University of North Dakota, Biology Departmental Seminar (Invited talk; local)
  23. UND SMHS Computational Data Analysis Core (CDAC). HPI COBRE Research Seminar. May 10, 2022. University of North Dakota (Contributed talk; local)
  24. Ontology-based literature mining analysis of molecular level interactions. The 11<sup>th</sup> International Workshop on Vaccine and Drug Ontology Studies (VDOS-2022). September 26, 2022. Ann Arbor, MI (Contributed talk; International)
  25. Leveraging Large Language Model for Identifying DDI & PPI. The 1<sup>st</sup> Vaccine Informatics Working Group Meeting. September 8, 2023. Ann Arbor, MI (Invited; Regional)
  26. Computational Data Analysis Core (CDAC) Projects. HPI COBRE Research Seminar. February 13, 2024. Grand Forks, ND (Local)
  27. Leveraging Computational Approaches in Systems Medicine: Insights into Neuropathy, Diabetes, and Beyond. Computational Platforms to Accelerate Precision Medicine Workshop. May 4, 2024. Taipei, Taiwan. (Invited)
  28. Single-cell RNA-sequencing deconvolutes cellular and molecular responses to diet and exercise interventions in prediabetic neuropathy. 2024 Peripheral Nervous Society Annual Meeting. Montreal, Canada (June 22-25, 2024) (Contributed talk; International)
  29. Integrating Genetics and Metabolomics in Amyotrophic Lateral Sclerosis (ALS): Pathways, Predictors, and Progress. US FDA. August 29, 2024. Silver Spring, Maryland. (Invited)
  30. Systems Biology Approaches to Investigate Mechanisms of Amyotrophic Lateral Sclerosis, a.k.a. Lou Gehrig's Disease. Taipei Medical University workshop on integrative utilization of data science, system pharmacology and quantitative methods to inform rare disease drug development. September 13, 2024. Taipei, Taiwan. (Invited)
  31. VIOLIN in the Era of AI: An Integrative Vaccine Knowledgebase and Analysis System. 2024 International Society for Vaccines. October 21-23, 2024. Seoul, Korea. (Contributed; International)

#### Panel discussion

1. AI in research and education. University of North Dakota. Teaching Transformation & Development Academy. September 19, 2024.

Abstracts (Poster) [Bold names are members of the Hur Lab]

1. Hur J, Park D, and Kim Y. Construction of Integrated Database for Protein Kinases and Proteases. RECOMB 2002. Washington D.C. (Poster)
2. Hur J, Lee S, Chung T, and Kim Y. A Mathematical Modeling of GO Hierarchy for Gene Expression Profiling Analysis. RECOMB 2002. Washington D.C. (Poster)
3. Hur J, Lee W, and Kim Y. Construction of Integrated Database for Protein Kinases and Proteases. The 1st annual conference of the Korean society for bioinformatics. Busan, Korea (Poster)
4. Lee S, Hur J, and Kim Y. GOODIES: A mathematical modeling of GO hierarchy for automated biological Validation and putative functional categorization of genes. The 1st annual conference of the Korean society for bioinformatics. Busan, Korea (Awarded as the best poster)
5. Hur J, Damaj M, Beremand P, Collins J, Hur J, and Thomas T. The Arabidopsis ABI5 bZIP gene alters the global pattern of embryo-related and ABA-regulated gene expression. American Society of Plant Biologists, Lake Buena Vista, Florida (Poster)
6. Costello J, Dalkilic M, Patwardhan R, Hur J, Middha S, Mehta K, Saple A, Colbourne J, Eads B, and Andrews J. InGeNE: Integrated Gene Network Explorer. i-Conference. Penn State University. (Poster)
7. Costello J, Dalkilic M, Patwardhan R, Middha S, Eads B, Colbourne J, Hur J, Mehta K, and Andrews J. Network Properties of a Gene Network Built from Drosophila melanogaster Data. NetSci Conference. Bloomington, Indiana (Poster)
8. Hur J and Tang H. Characterization of transcriptional responses to environmental stress by differential location analysis. Third Annual Indiana Bioinformatics Conference, Indianapolis, Indiana (Poster)
9. Hur J, States DJ, and Feldman EL. JUMiner: An online literature mining tool for target identification and functional enrichment analysis, NCIBI ARM 2008. National Center for Integrated Biomedical Informatics Annual Research Meeting, Ann Arbor, Michigan (Poster)
10. Hur J, Wiggin TD, Ade A, States DJ, and Feldman EL. JUMiner: An online literature mining tool for target identification and functional enrichment analysis. ISMB 2008, Toronto, Canada (Poster)
11. Hur J, Nair V, Wiggin TD, Kretzler M, Brosius FC, and Feldman EL. Conserved regulatory network of diabetic neuropathy and nephropathy. National Center for Integrated Biomedical Informatics Annual Research Meeting (NCIBI ARM) 2009, Ann Arbor, Michigan (Poster)
12. Hinder LM, Wiggin TD, Hur J, Kretzler M, Pennathur S, and Feldman EL. Bioinformatics discovery of genes relevant to diabetic neuropathy. NeuroDiab/ISDN 2009, Toronto, Canada (Poster)
13. Hur J, Schuyler AD, Backus C, Hayes JM, States DJ, Jagadish HV and Feldman EL. Discovery of literature-derived diabetes- and ROS-related targets and examination of SOD1 as a novel mediator of diabetic neuropathy in mice. NeuroDiab/ISDN 2009, Toronto, Canada (Poster)
14. Hur J, Kretzler M, Nair V, Jagadish HV, Sullivan KA, Anders SAA, and Feldman EL. Gene Expression Profiles Predictive of Diabetic Neuropathy Progression. American Neurological Association annual meeting 2009, Baltimore, Maryland (Poster)
15. Nair V, Hur J, Wiggin TD, Martini S, Brosius FC, Nelson R, Jagadish HV, Feldman EL, and Kretzler M. Identification of Shared Regulatory Transcriptional Networks in Diabetic Nephropathy and Neuropathy. American Society of Nephrology (ASN) 2009 Annual Meeting, San Diego, California (Poster)
16. Pande M, Hur J, Sullivan KA, Kretzler M, and Feldman EL. Transcriptional Profiling of Peripheral Neuropathy in Type 2 Diabetes Using db/db Mouse Model. 5th National Center for Integrative Biomedical Informatics (NCIBI) 2010 Annual Research Meeting, Ann Arbor, Michigan (Poster)
17. Pande M, Hur J, Sullivan KA, Kretzler M, and Feldman EL. Transcriptional Profiling of Peripheral Neuropathy in Type 2 Diabetes Using db/db Mouse Model. 18th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB), Boston, Massachusetts (Poster)
18. Hur J, Xiang Z, Feldman EL, and He Y. Ontology-based Vaccine Literature Mining and Indexing. 18th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB), Boston, Massachusetts (Poster)

19. Figueroa-Romero C, Pilsner JR., Hur J, and Feldman, EL. Epigenomics and Amyotrophic Lateral Sclerosis. International Symposium on ALS/MND. December 7-13, 2010. Orland, Florida (Poster)
20. Figueroa-Romero C, Hur J, Hong Y, Lunn JS, Pacut C, Delaney CE, Yung R, Callaghan BC, and Feldman EL. Identification of Epigenomic Modifications as Biomarkers for Amyotrophic Lateral Sclerosis. American Academy of Neurology. April 9-16. 2011. Honolulu, Hawaii (Poster)
21. Figueroa-Romero C, Hur J, Hong Y, Lunn JS, Pacut C, Delaney CE, Yung R, Callaghan BC, and Feldman EL. Identification of Epigenomic Modifications as Biomarkers for Amyotrophic Lateral Sclerosis. 136th American Neurological Association Annual Meeting. September 25-28, 2011. San Diego CA. (Poster)
22. Pande M, Hur J, Hong Y, Backus C, Hayes JM, Oh S, Kretzler M, and Feldman EL. Transcriptional Profiling of Diabetic neuropathy in the BKS db/db Mouse, a Mouse model of Type 2 Diabetes. Peripheral Nerve Society Biennial Meeting, June 25-29, 2011. Potomac, Maryland (Poster)
23. Sims-Robinson C, Zhao S, Hur J, and Feldman EL. Hippocampal endoplasmic reticulum stress in a murine model of type 2 diabetes. Keystone Symposia Conference
24. Hur J, Ozgur A, and He Y. Identification of fever and vaccine-associated gene interaction networks using ontology-based literature mining. International Conference on Biomedical Ontology – Vaccine and Drug Ontology in the Study of Mechanism and Effect, July 21, 2012. Graz Austria (Oral by He)
25. Feldman EL, Hur J, Bender D, Backus C, Hayes JM, Pande M, Cheng T. Inflammation in Diabetic Neuropathy. Keystone Symposia Conference
26. Figueroa-Romero C\*, Hur J\*, Bender DE, Cataldo MD, Smith AL, Yung R, Callaghan BC, and Feldman EL. Identification of Epigenetically Altered Genes in Sporadic Amyotrophic Lateral Sclerosis. Spring Symposium on Epigenetics 2013, Ann Arbor, MI (Poster)
27. O'Brien PD, Hur J, Robell NJ, Hayes JM, Oh SS, Dauch JR, Hong Yu, and Feldman EL. Neurological Complications of the BTBR OB/OB Mouse. American Diabetes Association 73rd Scientific Sessions, June 21-25, 2013. Chicago, Illinois (Poster)
28. Hur J, Sullivan KA, Callaghan BC, Pop-Busui R, and Feldman EL. Identification of factors associated with sural nerve regeneration and degeneration in diabetic neuropathy. American Diabetes Association 73rd Scientific Sessions, June 21-25, 2013. Chicago, Illinois (Guided audio poster)
29. Hur J, Liu Z, Tong W, and Bai PF. Systems pharmacology-based network analysis of drug-induced rhabdomyolysis. 1st Annual FDA Scientific Computing Day. July 14, 2013. Silver Spring, Maryland (Poster)
30. Hur J, Guo A, Loh W, Feldman EF and Bai PF. Systems pharmacology and transcriptomics analysis to identify signatures of drug-induced peripheral neuropathy. 1st Annual FDA Scientific Computing Day. July 14, 2013. Silver Spring, Maryland (Poster)
31. O'Brien PD, Hur J, Robell NJ, Hayes JM, Oh SS, Dauch JR, Hong Yu, and Feldman EL. Diabetic Neuropathy in the BTBR OB/OB Mouse. 2013 Peripheral Nerve Society Biennial meeting, June 29-July 3, 2013. Saint Malo, Brittany, France (Oral and poster presentation by f)
32. Himeno T, Lunn SJ, Backus C, Robinson C, Pacut C, Hayes JM, Oh SS, Dauch JR, McLean LL, Hinder LM, Hur J, O'Brien PD, and Feldman EL. Increased Expression of Neuronal Progenitor Markers in Dorsal Root Ganglia of Diabetic Mice. 2013 Peripheral Nerve Society Biennial meeting, June 29-July 3, 2013. Saint Malo, Brittany, France (Oral and poster presentation by f)
33. Hur J, Liu Z, Tong W, and Bai PF. Systems pharmacology-based network analysis of drug-induced rhabdomyolysis. US FDA Office of Clinical Pharmacology Science Day. September 16, 2013. Silver Spring, Maryland (Poster)
34. Sarntivijai S, Hur J, Ozgur A, He Y, Omenn GS, Athey BD, and Abernethy DR. An Ontology- and NLP-assisted Systems Pharmacology Analysis of Tyrosine Kinase Inhibitor Induced Cardiotoxicity. US FDA Office of Clinical Pharmacology Science Day. September 16, 2013. Silver Spring, Maryland (Poster)
35. Hur J, Guo A, Loh W, Feldman EF, and Bai PF. Systems pharmacology and transcriptomics analysis to identify signatures of drug-induced peripheral neuropathy. US FDA Office of Clinical Pharmacology Science Day. September 16, 2013. Silver Spring, Maryland (Poster)
36. Hur J, Sullivan KA, Callaghan BC, Pop-Busui R, and Feldman EL. Identification of factors associated with sural nerve regeneration and degeneration in diabetic neuropathy. 23rd Neurodiab Meeting. September 19-22, 2013. Barcelona, Spain (Oral presentation; presenting author)

37. Alameer RS, Hur J, Figueroa-Romero C, Feldman EL, and McEachin RC. Modeling Complex Genetic and Environmental Influences on ALS and FTD. A. Alfred Taubman Medical Research Institute 6th Annual Symposium. October 11, 2013. Ann Arbor, Michigan (Poster)
38. Hur J, Guo A, Loh W, Feldman EF, and Bai PF. Systems pharmacology and transcriptomics analysis to identify signatures of drug-induced peripheral neuropathy. A. Alfred Taubman Medical Research Institute 6th Annual Symposium. October 11, 2013. Ann Arbor, Michigan (Poster)
39. O'Brien PD, Hur J, Robell NJ, Hayes JM, Oh SS, Dauch JR, Hong Yu, and Feldman EL. Diabetic Neuropathy in the BTBR OB/OB Mouse. American Neurological Association's (ANA) 2013 Annual Meeting, October 13-15, 2013. New Orleans, LA (Poster)
40. Figueroa-Romero C\*, Hur J\*, Bender DE, Cataldo MD, Flores G, Jacoby S, Smith AL, Yung R, Callaghan BC, and Feldman EL. Identification of Epigenetically Altered Genes in Sporadic Amyotrophic Lateral Sclerosis. American Neurological Association's (ANA) 2013 Annual Meeting, October 13-15, 2013. New Orleans, LA (Poster)
41. Hur J, Sullivan KA, Callaghan BC, Pop-Busui R, and Feldman EL. Identification of factors associated with sural nerve regeneration and degeneration in diabetic neuropathy. American Neurological Association's (ANA) 2013 Annual Meeting, October 13-15, 2013. New Orleans, LA (Poster)
42. Sarntivijai S, Hur J, Ozgur A, Burkhart KK, He Y, Omenn GS, Athey BD, and Abernethy DR. Predicting Gene Interactions of Tyrosine Kinase Inhibitor-Induced Cardiotoxicity with Ontology of Adverse Events-assisted Bioinformatics. American Society for Clinical Pharmacology and Therapeutics 2014 Annual Meeting, March 18-22, 2014. To be held at Atlanta, Georgia (Poster)
43. Park M, Hur J, and Feldman EF. A centralized data mining and analysis portal for diabetic neuropathy research. The 9th Great Lake Bioinformatics (GLBio) Conference. May 16-18, 2014. Cincinnati, Ohio (Flash-talk and poster)
44. Hur J, Guo A, Loh W, Feldman EF, and Bai PF. Systems pharmacology analysis of drug-induced peripheral neuropathy. The 9th Great Lake Bioinformatics (GLBio) Conference. May 16-18, 2014. Cincinnati, Ohio (Flash-talk and poster)
45. Hur J, Guo A, Loh W, Feldman EF, and Bai PF. Systems pharmacology analysis of drug-induced peripheral neuropathy. International Conference on Systems Biology of Human Disease 2014. June 17-19, 2014. Boston, Massachusetts (Poster)
46. O'Brien PD, Robell NJ, Hur J, Hayes JM, Backus C, and Feldman EL. Characterization of diabetic peripheral neuropathy in male and female BTBR ob/ob mice reveals increased fiber loss in male mice that correlates with increased plasma triglycerides. Keystone Symposia 2015 The Crossroads of Lipid Metabolism & Diabetes (D6). Copenhagen, Denmark. (Poster by O'Brien)
47. Park M, Hur J, Eichinger F, Kretzler M, Brosius FC, and Feldman EL. Identification of Tissue-specific Effect of Pioglitazone Treatment in db/db Mice using RNA-Seq. American Diabetes Association 75th Scientific Sessions, June 5-9, 2015. Boston, Massachusetts (Oral by Park)
48. Hur J, O'Brien PD, Nair V, Hinder LM, Kretzler M, Brosius FC, and Feldman EL. Shared Transcriptional Networks Between Diabetic Peripheral Neuropathy And Nephropathy In Murine Models Of Diabetes. Peripheral Nerve Society biennial meeting, June 28-July 2, 2015. Quebec City, Quebec, Canada (Oral and poster by O'Brien)
49. Guo A, Racz R, Hur J, Lin Y, Xiang Z, Zhao L, Jiang G, Zhu Q, Bai J, and He Y. Ontology-based collection, representation and analysis of drug-associated neuropathy adverse events. International Conference of Biological Ontologies (ICBO) 2015 Vaccines and Drug Ontology Studies (VDOS) workshop, July 27, 2015. Lisbon Portugal (Oral by He)
50. Ozgur A, Hur J, and He Y. Extension of the interaction network ontology (INO) for literature mining of gene-gene interaction networks from sentences with multiple interaction keywords. International Workshop on Biomedical Data Mining, Modeling, and Semantic Integration: A promising Approach to Solving Unmet Medical Needs (ISWC-BDM2I 2015). October 11-12, 2015. Bethlehem, Pennsylvania. (Oral by He)
51. Park M, Hur J, Eichinger F, Kretzler M, Brosius FC, and Feldman EL. Identification of Tissue-specific Effect of Pioglitazone Treatment in db/db Mice using RNA-Seq. The 25th Annual Scientific Meeting of NEURODIAB, September 11-13, 2015. Elsinore, Denmark (Poster by Park)

52. Hsieh JH, Svoboda D, Hur J, Sipes N, Huang R, Paules R, and Auerbach S. NTP Tox21 Toolbox to prioritize chemicals for extensive toxicological testing. ASCCT: Integrated Approaches to Testing and Assessment: Promises and Challenges of a More Flexible Approach to Toxicology Testing. October 1-2, 2015. Durham, NC (Poster by Hsieh)
53. Hsieh JH, Svoboda D, Hur J, Sipes N, Huang R, Paules R, and Auerbach S. NTP Tox21 Toolbox to prioritize chemicals for extensive toxicological testing. FutureTox III: Transforming 21st Century Science into Risk Assessment and Regulatory Decision-Making. November 19-20, 2015. Arlington, VA (Poster by Hsieh)
54. McGregor BA, Porter J, Feldman EL, and Hur J<sup>S</sup>. Systems Pharmacology Approach to Identify Potential Therapeutic Small- Molecules for Treatment of Diabetic Peripheral Neuropathy. Experimental Biology (EB) American Society for Pharmacology & Experimental Therapeutics (ASPET) 2016 Meeting. April 2-6, 2016. San Diego (**Oral presentation presented by McGregor, a student in the lab; 2<sup>nd</sup> place – best abstract / presentation award**)
55. Bhattacharya A, Hur J, and Dhsarathy A. The Role of CCCTC Binding Factor (CTCF) in Epithelial to Mesenchymal Transition (EMT). North Dakota Academy of Science (NDAS) Annual Meeting, April 15-16, 2016. Fargo, North Dakota (Poster by Bhattacharya)
56. McGregor BA, Porter J, Feldman EL, and Hur J<sup>S</sup>. Systems Biology Approach to Identify Conserved Transcriptional Networks between Human and Murine Diabetic Neuropathy. American Diabetes Association 76<sup>th</sup> Scientific Sessions, June 10-14, 2016. New Orleans (**Oral presentation presented by McGregor, a student in the lab**)
57. Hsu CW, Hur J, Liu Z, and Bai JPF. Integrative systems approaches to repurposing drugs for treating ebola virus disease. *Drug Safety Gordon Research Conference*. June 26 – July 1, 2016. Easton, Massachusetts. (Poster by Hsu)
58. Ozgur A\*, Hur J\*, Xiang Z\*, Ong E, Radev DR, and He Y. Iagnet: A centrality and INO-based web system for analyzing and visualizing literature-mined networks. International Conference of Biological Ontologies (ICBO) & BioCreative 2016. August 1-4, 2016. Corvallis, Oregon. (**Flash oral talk & Poster presented by Hur**)
59. McGregor BA, Porter JE, Feldman EL, and Hur J. Transcriptional Signature of Diabetic Peripheral Neuropathy Shared Between Human and Mouse. *Graduate Research Achievement Day 2017*. University of North Dakota. Grand Forks, ND, March 2017 (**Poster by McGregor, a student in the lab**)
60. Guo K, de Anda-Jáuregui G, McGregor BA, Backus C, Pacut C, Feldman EL, and Hur J. RNA-Seq analysis of human diabetic neuropathy in subjects with type 2 diabetes. Diabetes. UND SMHS 37<sup>th</sup> Frank N. Low Research Day. April 6, 2017. Grand Forks, North Dakota. (**Poster by Guo, a post-doc in the lab**)
61. de Anda-Jáuregui G, McGregor B, Guo K, and Hur J<sup>S</sup>. Using systems pharmacology to identify common mechanisms of druginduced peripheral neuropathy. UND SMHS 37<sup>th</sup> Frank N. Low Research Day. April 6, 2017. Grand Forks, North Dakota. (**Poster by de Anda-Jáuregui, a post-doc in the lab**)
62. Bhattacharya A, Hur J, and Dhasarathy A. The Role of CCCTC Binding Factor CTCF in Epithelial to Mesenchymal Transition (EMT). UND SMHS 37<sup>th</sup> Frank N. Low Research Day. April 6, 2017. Grand Forks, North Dakota. (Poster by Bhattacharya)
63. McGregor BA, Porter JE, Feldman EL, and Hur J. Transcriptional Signature of Diabetic Peripheral Neuropathy Shared Between Human and Mouse. Frank N. Low Research Day. April 6, 2017. Grand Forks, North Dakota. (**Poster by McGregor, a student in the lab**)
64. Shin D, Lee KW, Tande DL, Hur J, Shivappa N, Wirth MD, and Hebert JR. Effects of Dietary Inflammatory Index and History of Gestational Diabetes Mellitus on Insulin Resistance. Experimental Biology (EB) American Society for Nutrition (ASN) 2017 Meeting. April 22-26, 2017. Chicago, Illinois. (Poster by Shin)
65. Shin D, Lee KW, Tande DL, Hur J, Chung HK, Shivappa N, Wirth MD, and Hebert JR. Prepregnancy Body Mass Index is Positively Associated with Dietary Inflammatory Index and C-Reactive Protein Concentrations during Pregnancy. Experimental Biology (EB) American Society for Nutrition (ASN) 2017 Meeting. April 22-26, 2017. Chicago, Illinois. (Poster by Shin)
66. Bhattacharya A, Hur J, and Dhasarathy A. The Role of CCCTC Binding Factor CTCF in Epithelial to Mesenchymal Transition (EMT). Experimental Biology (EB) American Society for Biochemistry and Molecular Biology (ASBMB) 2017 Meeting. April 22-26, 2017. Chicago, Illinois. (Poster by Bhattacharya)

67. Hur J<sup>S</sup>, Danes L, McGregor BA, Krout D, Hsieh JH, and Auerbach S. Tox21 Enricher: Web-based Chemical and Functional Enrichment Analysis Tool for Tox21 Toxicity Screening Platform. Experimental Biology (EB) American Society for Biochemistry and Molecular Biology (ASBMB) Pharmacogenomics and Toxicogenomics 2017 Meeting. April 22-26, 2017. Chicago, Illinois. (Poster by Danes & McGregor, students in the lab)
68. Guo K, de Anda-Jáuregui G, McGregor BA, Backus C, Pacut C, Feldman EL, and Hur J<sup>S</sup>. RNA-Seq analysis of human diabetic neuropathy in subjects with type 2 diabetes. Diabetes. 109<sup>th</sup> Annual Meeting of the North Dakota Academy of Science, April 28-29, 2017. Grand Forks. North Dakota. **(Poster by Guo, a post-doc in the lab)**
69. de Anda-Jáuregui G, McGregor B, Guo K, and Hur J<sup>S</sup>. Using systems pharmacology to identify common mechanisms of drug-induced peripheral neuropathy. 109<sup>th</sup> Annual Meeting of the North Dakota Academy of Science, April 28-29, 2017. Grand Forks, North Dakota. **(Oral by de Anda-Jáuregui, a post-doc in the lab; best post-doc presentation award)**
70. Hinder LM, Guo K, de Anda-Jáuregui G, McGregor BA, Backus C, Feldman EL, Hur J<sup>S</sup>. Effect of Pioglitazone Treatment on Diabetic Neuropathy in STZ-Diabetic Mice. American Diabetes Association 77<sup>th</sup> Scientific Sessions, June 9-13, 2017. San Diego, California. **(Poster by Hur)**
71. McGregor BA, Hinder LM, Guo K, de Anda-Jáuregui G, Pennathur S, Kretzler M, Brosius FC, Porter J, Feldman EL, and Hur J<sup>S</sup>. Conserved gene expression changes and dysregulated pathways in complication-prone tissues of streptozotocin-diabetic mouse. American Diabetes Association 77<sup>th</sup> Scientific Sessions, June 9-13, 2017. San Diego, California. **(Poster by McGregor, a student in the lab)**
72. de Anda-Jáuregui G, Guo K, McGregor BA, and Hur J<sup>S</sup>. Pathway-level effects of pioglitazone on neuropathy in the BKS-db/db mouse model of type 2 diabetes. American Diabetes Association 77<sup>th</sup> Scientific Sessions, June 9-13, 2017. San Diego, California. **(Poster by de Anda-Jáuregui, a post-doc in the lab)**
73. Cho EH, Jeong JY, and Hur J<sup>S</sup>. Ly2405319, an analog of FGF-21 ameliorates liver fibrosis through succinate-GPR 91 pathway in mice. American Diabetes Association 77<sup>th</sup> Scientific Sessions, June 9-13, 2017. San Diego, California. (Poster by Cho)
74. Guo K, de Anda-Jáuregui G, McGregor BA, Backus C, Pacut C, Feldman EL, and Hur J. RNA-Seq analysis of human diabetic neuropathy in subjects with type 2 diabetes. Diabetes. American Diabetes Association 77<sup>th</sup> Scientific Sessions, June 9-13, 2017. San Diego, California. **(Poster by Guo, a post-doc in the lab)**
75. de Anda-Jáuregui G, Guo K, McGregor B, and Hur J<sup>S</sup>. Network pharmacology exploration of the anti-inflammatory drug space. The 25th Conference on Intelligent Systems for Molecular Biology & 16th European Conference on Computational Biology. July 21-25, 2017. Prague, Czech Republic. **(Poster by de Anda-Jáuregui, a post-doc in the lab)**
76. de Anda-Jáuregui G, Guo K, McGregor B, and Hur J<sup>S</sup>. Changes in pathway connectivity induced by disease and therapeutic treatment: the case of diabetic neuropathy and pioglitazone. Conference on Complex Systems 2017, September 17-22, 2017. Cancún, Mexico. **(Oral by de Anda-Jáuregui, a post-doc in the lab)**
77. de Anda-Jáuregui G, McGregor B, Guo K, and Hur J<sup>S</sup>. The use of a drug-gene perturbation network for the study of drug side effects: The case of drug-induced peripheral neuropathy. The 1<sup>st</sup> Latin American Conference on Complex Networks. September 25-29, 2017. Puebla, Mexico. **(Oral by de Anda-Jáuregui, a post-doc in the lab)**
78. Figueroa-Romero C, Lo TW, Hur J, Stoll E, Spring C, Pacut C, Backus C, Goutman SA, Nagrath S, and Feldman EL. Extracellular Vesicles From ALS Spinal Cord And Brain Contain Dysregulated Mirnas. Neuroepigenetics and Neuroepitrancriptomics Conference. February 24-27, 2018. Cancun, Mexico **(Poster by Figueroa-Romero & Hur)**
79. O'Brien PD, Hinder LM, Guo K, Hur J, Hayes JM, Mendelson EF, Tabbey MA, Backus C and Feldman EL. Dietary Reversal Ameliorates Peripheral Neuropathy in Mouse Models of Diabetes. Keystone Symposia: Uncomplicating diabetes: Reducing the burden of diabetes-related end organ injury. February 25 – March 1, 2018. Santa Fe, New Mexico (Poster by O'Briend)
80. Elzinga S\*, Guo K\*, Eid S, de Anda-Jauregui G, Figueroa-Romero C, McGregor BA, Backus Carey, Pacut C, Feldman EL, and Hur J<sup>S</sup>. Genome-wide DNA methylation profiling of human diabetic peripheral neuropathy

- in subjects with type 2 diabetes mellitus. Keystone Symposia: Uncomplicating diabetes: Reducing the burden of diabetes-related end organ injury. February 25 – March 1, 2018. Santa Fe, New Mexico (Poster by Elzinga)
81. Pan X, Wang J, Deng S, Hur J, Ozgur A, and He Y. Ontology-based systematic collection, representation, and analysis of suicidal behavior-related genes. The 11th international Biocuration Conference, April 08-11, 2018. Shanghai, China (Poster by Pan)
  82. Guo K\*, Elzinga S\*, Eid S, de Anda-Jauregui G, Figueroa-Romero C, McGregor BA, Backus Carey, Pacut C, Feldman EL, and Hur J<sup>§</sup>. Genome-wide DNA methylation profiling of human diabetic peripheral neuropathy in subjects with type 2 diabetes mellitus. Frank N. Low Research Day. April 19, 2018. Grand Forks, North Dakota (**Oral presentation by Guo, a post-doc in the lab**)
  83. McGregor BA, Guo K, Hur J and Porter J. Expression-Based Compound Signatures Used to Identify Alternative Research Uses. Frank N. Low Research Day. April 19, 2018. Grand Forks, North Dakota. (**Poster by McGregor, a student in the lab**)
  84. Danes L, Hsieh JH, McGregor B, Krout D, Hu WC, Auerbach S, and Hur J<sup>§</sup>. Tox21 Enricher: Enrichment Analysis of Chemical Annotations for Tox21 Toxicity Screening Platform. Frank N. Low Research Day. April 19, 2018. Grand Forks, North Dakota. (**Poster by Danes, a student in the lab**) – **Best presentation award in the ‘Undergraduate’ category**
  85. McGregor BA, Guo K, Hur J, and Porter J. Systems Pharmacology Approach to Assign Expression Based Signatures to Adrenergic Compounds. Experimental Biology (EB) American Society for Pharmacology & Experimental Therapeutics (ASPET) 2018 Meeting. April 21-25, 2018. San Diego, California. (**Poster by McGregor, a student in the lab**)
  86. Guo K\*, Elzinga S\*, Eid S, de Anda-Jauregui, Figueroa-Romero C, McGregor BA, Backus Carey, Pacut C, Feldman EL, and Hur J<sup>§</sup>. Global DNA methylation profiling of human diabetic peripheral neuropathy in subjects with T2DM. The 110th North Dakota Academy of Science Annual Meeting. April 27, 2018. Minot, North Dakota. (**Poster by Guo, a post-doc in the lab**)
  87. Guo K, Hur J, Lubin F, Lusardi T, Perez G, Ruskin D, Saleumvong B, Sanchez R, Ohm J, Geiger J, Masino S, and Boison D. Protocol matters - reproducibility and rigor of DNA methylation data sets. The 5th Epigenetics and Epigenomics Symposium. May 7-8, 2018. Grand Forks, North Dakota. (**Poster by Guo, a post-doc in the lab**)
  88. Guo K, Elzinga S, Eid S, Figueroa-Romero C, McGregor BA, de Anda-Jauregui G, Pacut C, Feldman EL and Hur J. Genome-wide DNA methylation profiling of human diabetic peripheral neuropathy in subjects with type 2 diabetes mellitus. Gordon Research Conference Epigenomics of Diabetes and Other Metabolic Diseases. May 27-June 1, 2018. Hong Kong, China. (*Poster*)
  89. Eid S, Hayes JM, Pacut C, Mendelson FE, Guo K, Hur J, and Feldman EL. Nox, Nox, Are You Here? The Emerging Role of NADPH Oxidase Nox5 in Diabetic Neuropathy. The American Diabetes Association 78th Scientific Sessions, June 22-26, 2018, Orlando, Florida. (Poster by Eid)
  90. O’Brien PD, Guo K, Hinder LM, Hur J, John M. Hayes<sup>1</sup>, Mendelson EF, Tabbey MA, Backus C and Feldman EL. Amelioration of Peripheral Neuropathy in Mouse Models of Diabetes by Dietary Reversal. The American Diabetes Association 78th Scientific Sessions, June 22-26, 2018, Orlando, Florida. (Poster by O’Brien)
  91. Guo K, Elzinga S, Eid S, Figueroa-Romero C, McGregor BA, de Anda-Jauregui G, Pacut C, Feldman EL, and Hur J<sup>§</sup>. Large scale DNA methylation profiling of human diabetic peripheral neuropathy in subjects with type 2 diabetes mellitus. The American Diabetes Association 78th Scientific Sessions, June 22-26, 2018, Orlando, Florida. (**Guided poster by Guo, a post-doc in the lab**)
  92. Guo K, Feldman EL, and Hur J<sup>§</sup>. Two-way Orthogonal Partial Least Squares (O2PLS) analysis of the lipidome and transcriptome in prediabetic and diabetic neuropathy. The American Diabetes Association 78th Scientific Sessions, June 22-26, 2018, Orlando, Florida. (**Guided poster by Guo, a post-doc in the lab**)
  93. Claycombe-Larson KJ, Bundy AN, Darland D, Hur J, Dhasarathy A, Perley D, Scheidegger A, Johnson L, Krout D, and Roemmich JN. Obesity during human pregnancy is associated with altered placental tissue structure and RBMS1 mRNA expression. The American Society of Nutrition Annual Meeting 2018. June 9-12, 2018. Boston, MA. (Poster by Claycombe-Larson)

94. Guo K, and Hur J<sup>S</sup>. RichR: an R package for enrichment analysis and network construction for biological datasets. The 26th Intelligent Systems for Molecular Biology conference. Chicago. July 6-10, 2018 (**Poster by Guo, a post-doc in the lab**)
95. Kim J, Yoon H, White T, Zhang P, Brown J, Kim J, Hur J, Fryer JD, and LeBrasseur NK. The Role of miR-7 in The Regulation of Energy Homeostasis. Keystone Symposia Drivers of Type 2 Diabetes: From Genes to Environment (S1), October 7-11, 2018, Seoul, South Korea. (Poster by Kim)
96. Koney-Kwaku N, Guo K, Perley D, Hur J, Grove B, and Nechaev S. Post-transcriptional processing at the promoter proximal RNA polymerase II pausing. A possible mechanism for premature termination. Experimental Biology 2019, April 6-9, 2019. Orlando, Florida. (Poster by Koney-Kwaku)
97. Shin D and Hur J<sup>S</sup>. Predictive modeling of postpartum depression using Machine Learning approaches. Nutrition 2019, June 8-11, 2019, Baltimore, Maryland. (Poster by Shin)
98. Guo K, McGregor BA, Porter JE, and Hur J<sup>S</sup>. VennDetail: An R package for visualizing and extracting details of multi-set intersection. ND Academy of Science Annual Meeting 2019. March 8, 2019. Grand Forks, ND (**Poster by Guo, a post-doc in the lab**)
99. Guo K, McGregor BA, Porter JE, and Hur J<sup>S</sup>. VennDetail: An R package for visualizing and extracting details of multi-set intersection. Frank N. Low Research Day. April 25, 2019. Grand Forks, North Dakota. (**Poster by Guo, a post-doc in the lab**)
100. McGregor BA, Schommer J, Guo K, Ghribi O, Hur J, and Porter JE. Alpha-synuclein-induced methylation and gene expression changes in microglia. ND EPSCoR 2019 State Conference. March 27, 2019. Fargo, ND. (**Poster by McGregor, a student in the lab**)
101. Guo K, Feldman EL, and Hur J<sup>S</sup>. Identification of repurposable drug candidates for diabetic peripheral neuropathy using high-throughput drug-perturbation data. The 79th American Diabetes Association Scientific Sessions. June 7-11, 2019. San Francisco, CA. (**Poster by Hur**)
102. Eid S, Guo K, Elzinga S, Figueroa-Romero C, Hinder L, Pacut C, Hur J and Feldman E. Genome-wide DNA Methylation Profiling Identifies Epigenetic Clues into Human Peripheral Neuropathy in Type 2 Diabetes. Peripheral Nerve Society Meeting, Genoa, June 2019. (Poster by Eid)
103. O'Brien PD, Guo K, Eid SA, Rumora AE, Hinder LM, Hayes LM, Mendelson FE, Hur J and Feldman EL. Altered Nerve Triglycerides in Mouse Models of Diabetes with Neuropathy. Peripheral Nerve Society Meeting. June 22-26, 2019, Genoa, Italy (Oral presentation and poster by O'Brien)
104. Gao P, Guo K, Lin P, Hur J, and Wu M. An integrative bioinformatics pipeline to facilitate the discovery of novel anti-CRISPR proteins. 2019 Host-Pathogen Interactions Symposium. September 17, 2019. Grand Forks, ND (Poster by Gao)
105. Wang Z, Gao P, Pu Q, Guo K, Lin P, Qin S, Hur J and Wu M. Suppression of cGAS protects against colitis through modification of the intestinal microbiota. 2019 Host-Pathogen Interactions Symposium. September 17, 2019. Grand Forks, ND (Poster by Wang)
106. Elzinga S, Rumora AE, Hinder LM, Guo K, Eid S, O'Brien PD, Hayes JM, Tabbey MA, Hur J and Feldman EL. Nailing down peripheral neuropathy; a lipidomics approach. Neuroscience 2019, October 19-23. Chicago, USA (Poster by Elzinga)
107. Goutman SA, Boss J, Kim S, Guo K, Hur J, Mukherjee B, Batterman S, and Feldman EL. Unique metabolomic signatures in ALS participants based on persistent organic pollutant plasma concentrations. Northeast Amyotrophic Lateral Sclerosis Consortium (NEALS) 2019 meeting, October 2019. Clearwater Beach, FL. (Poster by Goutman)
108. Guo K, Figueroa-Romero C, Eid S, Hinder LM, Petit H, Hur J, and Feldman EL. Dietary reversal improves peripheral neuropathy and gut microbiota profile in a murine model of prediabetes and obesity. The American Diabetes Association 81<sup>st</sup> Scientific Sessions. June 25-29, 2020. Virtual (**Poster by Guo, a post-doc in the lab**)
109. Elzinga SE, Henn RE, O'Brien PD, Guo K, Eid SA, Rumora AE, Hayes JM, Mendelson FE, Feldman EL, and Hur J<sup>S</sup>. Hippocampal transcriptomic change due to high-fat diet in prediabetic mice. The American Diabetes Association 81<sup>st</sup> Scientific Sessions. June 25-29, 2020. Virtual (Proceedings only)
110. Alakwaa F, Goutman S, Hur J, and Feldman EL. Metabolite enzyme association predictor (MeaP): An algorithm to predict metabolite-enzyme association from Protein-Protein Interaction and metabolomics

- data. International Society for Computational Biology 2020. Virtual meeting. July 12-16 (Poster by Alakwaa)
111. McGregor B, Adeluwa T, Guo K, and Hur J. Gene expression signature-based machine learning classifier of drug-induced liver injury. Critical Assessment of Massive Data Analysis (CAMDA) – CMap Drug Safety Challenge. 28th Intelligent Systems for Molecular Biology conference. July 13, 2020. (International; **Poster by McGregor, a post-doc in the lab**)
  112. Hur J<sup>S</sup>, Huffman A, Ozgur A, and He Y. Literature mining-based analysis of host-coronavirus gene-gene interactions. University of North Dakota Host-Pathogen Interactions CoBRE Symposium. September 15, 2020. Virtual. (**Poster by Hur**)
  113. Guo K, Wang Z, Gao P, Pu Q, Wu M, Li C, and Hur J<sup>S</sup>. Drug repurposing for various courses of COVID-19 based on single-cell RNA sequencing data. University of North Dakota Host-Pathogen Interactions CoBRE Symposium. September 15, 2020. Virtual. (Poster by Wang)
  114. Henn R, Elzinga S, Guo K, Hur J, Feldman EL. Examining the role of obesity in hippocampal activation using single-cell RNA sequencing. American Neurology Association Conference. Oct 17-10, 2021. (Virtual; presented by Henn)
  115. Figueroa-Romero C, Guo K, Noureldein M, Murdock BJ, Goutman SA, Hur J, Batterman S, Feldman EL. The gut microbiome: modulator of environmental insults in Amyotrophic Lateral Sclerosis. American Neurology Association Conference. Oct 17-10, 2021. (Virtual; presented by Figueroa-Romero)
  116. Adeluwa T, Kim E, Hur J. GBMPSO: Hybrid Gradient Boosting Machines with Particle Swarm Optimization in Cell Segmentation Data. IEEE Symposium Series on Computational Intelligence (SSCI) (SSCI 2021). Dec 5-7, 2021. Orlando Florida USA. (Full oral presentation by Mr. **Adeluwa**, a graduate student in the lab)
  117. Raihan MO, McGregor BA, Hur J, and Porter JE. Alpha-Synucleinopathy-Related Transcriptomic Changes in Microglia. 7th Epigenetics Symposium, March 15-16, 2022, Grand Forks, ND (Poster presented by Raihan)
  118. McGregor BA, Raihan MO, Porter JE, and Hur J. Nanopore Methylation analysis of microglia isolated from a murine model of  $\alpha$ -synucleinopathy. The 7th Epigenetics Symposium, March 15-16, 2022, Grand Forks, ND (Poster presented by **McGregor**)
  119. Raihan MO, McGregor BA, Hur J, and Porter JE. Alpha-Synucleinopathy-Related Transcriptomic Changes in Microglia. The 42<sup>nd</sup> Frank Low Research Day, April 21, 2022, Grand Forks, ND (Poster presented by **Raihan**)
  120. Guo K, Noureldein M, Elzinga S, Kim B, Savelieff M, Jacoby S, Hur J<sup>\*</sup>, and Feldman EL<sup>\*</sup>. Metabolic syndrome produces insulin resistance in the brain and impairs oligodendrocyte metabolic support of neurons: a novel mechanism for dementia. 2022 Caswell Diabetes Institute – metabolism, Obesity & Diabetes (CDI-MOD) Symposium with Frontiers in Diabetes Complications. May 11-12, 2022. Ann Arbor, MI (**Poster presented by Hur**)
  121. McGregor BA, Hur J, and Roiko M. SARS-CoV-2 Whole Genome Sequencing and Microbiome Analysis. DaCCoTA Annual Conference. Aug 2022. (Poster presented by Roiko)
  122. Raihan MO, McGregor BA, Hur J<sup>\*</sup>, and Porter JE<sup>\*</sup>. Exploring the Role of Microglia in  $\alpha$ -Synucleinopathy phenotypes. Seminar for the Epigenetics COBRE group. September 21, 2021. (Oral presented by **Raihan and McGregor**)
  123. McGregor BA and Hur J. The University of North Dakota Computational Data Analysis Core. The 7<sup>th</sup> annual Host-Pathogen Symposium. October 3-4, 2022. Grand Forks, ND (Poster presented by **McGregor**)
  124. McGregor BA, Tyagi A, Hill M, Nausheen S, DeKumar B, Nechaev S, Parrello D, Hur J, and Roiko M. SARS-CoV-2 Whole Genome Sequencing and Metagenomic Analysis. The 7<sup>th</sup> annual Host-Pathogen Symposium. October 3-4, 2022. Grand Forks, ND (Poster presented by **McGregor**)
  125. McGregor BA, Tyagi A, Hill M, Nausheen S, De Kumar B, Nechaev S, Parrello D, Hur J, and Roiko M. SARS-CoV-2 Whole Genome Sequencing and Metagenomic Analysis. American Society for Microbiology (ASM). June 15 - 19, 2023 | Houston, TX
  126. Rehana H, Cam NB, Basmaci M, Ozgur A, He Y, and Hur J. Evaluation of Generative Pre-Trained Transformer 3 (GPT-3) on identifying protein-protein interactions from biomedical text. University of

- North Dakota Graduate Research Achievement Day (GRAD), March 2-3, 2023. Grand Forks, ND (Poster presented by **Rehana**)
127. Aminu O, de Kumar B, and Hur J. Understanding Nanog's role in cell differentiation. University of North Dakota Graduate Research Achievement Day (GRAD), March 2-3, 2023. Grand Forks, ND (Poster presented by **Aminu**; **2<sup>nd</sup> base presentation award**)
  128. Aminu O, de Kumar B, and Hur J. Understanding Nanog's role in cell differentiation. University of North Dakota Frank Low Research Day, April 13, 2023. Grand Forks, ND (Poster presented by **Aminu**)
  129. Amith M, Hur J., Komalsari R, Roberts K, and Tao C. Preliminary Word-Embedding Experiment to Explore Network Structures of Alzheimer's Medications from PubMed Literature. Computational Intelligence Methods for Bioinformatics and Biostatistics (CIBB) 2023. (Poster presented by Amith)
  130. McGregor BA and Hur J. Computational Data Analysis Core (CDAC) at the University of North Dakota. University of North Dakota Host Pathogen Interaction COBRE Symposium. September 18-19, 2023. Grand Forks, North Dakota. (Poster presented by McGregor).
  131. McGregor BA and Hur J. Computational Data Analysis Core (CDAC) at the University of North Dakota. University of North Dakota Biomedical Sciences Departmental Retreat. October 21, 2023. Grand Forks, North Dakota. (Poster presented by Hur J).
  132. Rehana H, Zheng J, He Y, and Hur J. ChatGPT to identify drug-drug interactions from texts. The 12th Vaccines and Drug Ontology Studies (VDOS) workshop. Aug. 29th, 2023. University of Brasilia, Brasilia, DF, Brazil. (Oral presentation by **Rehana**)
  133. Rehana H, Cam NB, Basmaci M, Ozgur A, He Y, and Hur J. Identifying Protein-Protein Interaction from Biomedical Text Using Generative Pre-trained Transformer. University of North Dakota Cybersecurity Awareness & Research Symposium (CARS) 2023. October 30-31, 2023. Grand Forks, ND (Poster presented by **Rehana**, **1<sup>st</sup> place award**)
  134. Jemiyo C, Afghah Z, Dawn D, Glenda L, Jurivich D, Johnson M, and Hur J. Analyzing Elderly Falls Risk Factors, with a Focus on Polypharmacy. 2023 University of North Dakota International Education Week. November 16, 2023. Grand Forks, North Dakota. (Poster presented by **Jemiyo**)
  135. Guo K, Eid S, Feldman EL, and Hur J. Dietary Reversal and/or Exercise Correct Peripheral Neuropathy in Diet-Induced Obesity Mouse Model. Northern Plains Biological Symposium 2024. March 28, 2024. Grand Forks, North Dakota. (Poster presented by **Guo**)
  136. Jemiyo C, Afghah Z, Dawn D, Glenda L, Jurivich D, Johnson M, and Hur J. Analyzing Elderly Falls Risk Factors, with a Focus on Polypharmacy. Northern Plains Biological Symposium 2024. March 28, 2024. Grand Forks, North Dakota. (Oral presentation by **Jemiyo**)
  137. Huang F, Guo K, Baird L, Feldman EL, Goutman S, Ben M, and Hur J. Transcriptomics analysis with various tofacitinib dose treatments of amyotrophic lateral sclerosis mice. Northern Plains Biological Symposium 2024. March 28, 2024. (Poster presented by **Huang**)
  138. Rehana H, Zheng J, He Y, and Hur J. Identifying Drug-Drug Interactions from Biomedical Texts using Large Language Models. Northern Plains Biological Symposium 2024. March 28, 2024. (Poster presented by **Rehana**)
  139. Jemiyo C, Afghah Z, Dawn D, Glenda L, Jurivich D, Johnson M, and Hur J. Analyzing Elderly Falls Risk Factors, with a Focus on Polypharmacy. 44th Annual Frank Low Research Day 2024. April 11, 2024. Grand Forks, North Dakota. (Poster presented by **Jemiyo**)
  140. Rehana H, Zheng J, He Y, and Hur J. Identifying Drug-Drug Interactions from Biomedical Texts using Large Language Models. University of North Dakota 2024 Frank Low Research Day. April 11, 2024. Grand Forks, North Dakota. (Poster presented by **Rehana**).
  141. Guo K, Eid S, Feldman EL, and Hur J. Dietary Reversal and/or Exercise Correct Peripheral Neuropathy in Diet-Induced Obesity Mouse Model. 44<sup>th</sup> Annual Frank N. Low Research Day. April 11, 2024. Grand Forks, ND. (Poster presented by **Guo**)
  142. Huang F, Guo K, Baird L, Feldman EL, Goutman S, Ben M, and Hur J. Transcriptomics analysis with various tofacitinib dose treatments of amyotrophic lateral sclerosis mice. 44<sup>th</sup> Annual Frank N. Low Research Day. April 11, 2024. Grand Forks, ND. (Poster presented by **Huang**)

143. Rehana H, Zheng J, He Y, and Hur J. Identifying Drug-Drug Interactions from Biomedical Texts using Large Language Models. 44<sup>th</sup> Annual Frank N. Low Research Day. April 11, 2024. Grand Forks, ND. (Poster presented by **Rehana**)
144. McGregor BA and Hur J. Capabilities of the Computational Data Analysis Core (CDAC) at the University of North Dakota. University of North Dakota Epigenetics COBRE Symposium. May 13-14, 2024. Grand Forks, North Dakota. (Poster presented by **McGregor**).
145. Huffman A, Hur J, Tao C, and He Y. VIOLIN In 2024: 15 Years of Vaccine Resource Development. AMIA 2024 Informatics Summit, March 2024. (Poster presented by Huffman)
146. Rehana H, Çam NB, Basmaci M, Özgür A, He Y, and Hur J. Leveraging Large Language Models for Extracting Protein-Protein Interactions from Biomedical Corpora. South Dakota State University 2024 Data Science Symposium. February 5-6, 2024. Sioux Falls, South Dakota. (Poster presented by **Rehana**; Travel award)
147. Rehana H, Çam NB, Basmaci M, Zheng J, Jemiyo C, He Y, Özgür A, and Hur J. Extracting Protein-Protein Interactions from Biomedical Literature using Large Language Models. University of North Dakota Graduate Research Achievement Day (GRAD), February 28-29, 2024. Grand Forks, ND (Poster presented by **Rehana**)
148. He Y, Huffman A, Zheng J, Tao C, and Hur J. VIOLIN in 2024: Comprehensive Vaccine Knowledgebase and Vaccine Data Standardization, Integration, and Analysis. American Society for Microbiology (ASM) MICROBE 2024. June 13-17, 2024, Atlanta (Poster presented by He)
149. Eid S, Guo K, Hur J, and Feldman EL. Single-cell RNA-sequencing deconvolutes cellular and molecular responses to diet and exercise interventions in prediabetic neuropathy. September 5-8, 2024. Rome, Italy. (Oral presentation by Feldman)
150. Rehana H, He Y, and Hur J. Cancer Vaccine Adjuvant Name Recognition from Clinical Trial Data using Large Language Models. The 13th Vaccines and Drug Ontology Studies (VDOS) workshop. Jul. 22, 2024. University Twente, Enschede, The Netherlands. (Oral presentation by **Rehana**)
151. Huffman A, Zheng J, Masci AM, Hur J, Tao C, and He Y. VS-MIS: A vaccine study minimal information standard and its ontological representation and applications. The 13th Vaccines and Drug Ontology Studies (VDOS) workshop. Jul. 22, 2024. University Twente, Enschede, The Netherlands. (Oral presentation by Huffman)
152. Çam NB, Rehana H, Zheng J, Bansal B, He Y, Hur J<sup>S</sup> and Özgür A<sup>S</sup>. Ontology-based protein-protein interaction explanation using large language models. The 13th Vaccines and Drug Ontology Studies (VDOS) workshop. Jul. 22, 2024. University Twente, Enschede, The Netherlands. (Oral presentation by Çam)
153. Rehana H\*, Bansal B\*, Çam NB, Zheng J, He Y, Özgür A, and Hur J. Nested Named Entity Recognition using Multilayer BERT-based Model. Conference and Labs of the Evaluation Forum (CLEF) 2024. September 9-12, 2024, Grenoble, France. (Presented by **Bansal**)
154. Elzinga S, Noureldein M, Guo K, Jang DG, Hayes J, Henn R, Webber-Davis I, Mendelson F, Parent R, Rigan D, Allouch A, Turfah A, Zhao L, Murphy G, Hur J, Feldman EL. Long-term high-fat feeding: Connecting metabolism, cognitive impairment, and altered microglial morphology. American Neurology Association Conference, Sept 14-17, 2024. Orlando, Florida (Poster presented by Elzinga)
155. McGregor BA and Hur J. Computational Data Analysis Core (CDAC) at the University of North Dakota. Host-Pathogen Interactions CoBRE Symposium. October 1, 2024. Grand Forks, ND. (Presented by **McGregor**)
156. Kim M, Lee S, Hur J<sup>S</sup>, and Shin D<sup>S</sup>. Integrating DNA methylation and nutrition to predict metabolic syndrome: insights from the KoGES cohort. 2024 Korean Nutrition Society Annual Meeting. October 18, 2024. Seoul, Korea. (Poster by Kim; **awarded the 3<sup>rd</sup> best poster presentation**)
157. Lee S, Kim M, Hur J, and Shin D. Metabolomics identifies nutritional pathways associated with metabolic syndrome. 2024 Korean Nutrition Society Annual Meeting. October 18, 2024. Seoul, Korea. (Poster by Lee)

158. Rehana H, McGregor B, He Y, and Hur J. Cancer Vaccine Adjuvant Name Recognition from Clinical Trial Data using Large Language Models. The 2024 International Society for Vaccines (ISV) Annual Congress. October 21-23, 2024. Seoul, Korea. (Poster presentation by **Hur**)
159. Rehana H\*, Bansal B\*, Çam NB, Zheng J, He Y, Özgür A, and Hur J. Nested Named Entity Recognition using Multilayer BERT-based Model. ND EPSCoR State Conference. November 21, 2024. Grand Forks, ND. (Presented by **Bansal**)
160. Jemiyo C, Afghah Z, Dawn D, Glenda L, Jurivich D, Johnson M, and Hur J. Analyzing Elderly Falls Risk Factors, with a Focus on Polypharmacy. ND EPSCoR State Conference, November 21, 2024. Grand Forks, North Dakota. (Poster presented by **Jemiyo**)
161. Guo K, Elzinga S, Turfah A, Henn R, Webber-Davis I, Hayes J, Pacut C, Teener S, Carter A, Tigan D, Allouch A, Jang DG, Parent R, Glass E, Murphy G, Lentz S, Chen K, Zhao L, Hur J, Feldman E. Metabolic stress and age drive inflammation and cognitive decline in mice and humans. ND EPSCoR State Conference, Bio & Biomedical Computation Networking Seminar. November 20, 2024. Grand Forks, ND. (Presented by **Guo**)
162. Huang F, Guo K, Baird L, Feldman EL, Goutman S, Ben M, and Hur J. Transcriptomics analysis with various tofacitinib dose treatments of amyotrophic lateral sclerosis mice. ND EPSCoR State Conference, Bio & Biomedical Computation Networking Seminar. November 20, 2024. Grand Forks, ND. (Poster presented by **Huang**)
163. Bansal B, Combs P, Basmaci M, Ozgur A, He Y, Mathur R, Hur J. Iagnet: A Web-Based Literature Mining System for Gene Interaction Networks. ND EPSCoR State Conference, Bio & Biomedical Computation Networking Seminar. November 20, 2024. Grand Forks, ND. (Presented by **Bansal**)
164. McGregor BA, Raihan MO, Brishti A, Hur J, Porter JE. Deciphering Motor Dysfunction and Microglial Activation in mThyl- $\alpha$ -Synuclein Mice: A Comprehensive Study of Behavioral, Gene Expression, and Methylation Changes. ND EPSCoR State Conference, Bio & Biomedical Computation Networking Seminar. November 21, 2024. Grand Forks, ND. (Presented by **McGregor**)
165. Rehana H, McGregor B, He Y, and Hur J. Recognizing Cancer Vaccine Adjuvant Names from Clinical Trial Data with Large Language Models. ND EPSCoR State Conference, Bio & Biomedical Computation Networking Seminar. November 21, 2024. Grand Forks, ND. (Presented by **Rehana**)
166. Midlife Obesity and Prediabetes: Influence of cGAS/STING on Later Life Cognitive Impairment. 2025 American Physiology Summit, April 24-27, 2025. Baltimore, MD. (to be presented by Elzinga)
167. Elzinga S, Guo K, Hayes J, Pacut C, Rigan D, Teener S, Webber-Davis I, Carter A, Park J, Jang D, Hur J, and Feldman E. Sexually Dimorphic Microglial Senescence And Inflammatory Mechanisms In Obesity And Prediabetes Induced Cognitive Impairment. American Diabetes Association 85<sup>th</sup> Scientific Sessions. June 20-23, 2025. Chicago, IL. (to be presented by Elzinga)
168. Rehana H, Zheng J, Yeh L, Bansal B, Cam BN, Özgür A, He Y, Hur J. Leveraging Large Language Models to Identify Vaccine Adjuvants from Clinical Trial Data. American Society for Microbiology Microbe 2025. June 19-23, 2025. Los Angeles, California. (to be presented by **Hur**).
169. Huffman A, Zheng J, Wu G, Cui L, Athey B, Hur J, Tao C, and He Y. SEA CDM: An ontology-based Study-Experiment-Assay Common Data Model for interoperable biomedical experimental data standardization and integration and its application in vaccine studies. NIH Data Repository & Knowledgebase Program Network Meeting. March 5-6, 2025. Rockville, MD. (Presented by He).
170. Rehana H, Zheng J, Yeh L, Bansal B, Cam BN, Jemiyo C, McGregor BA, Özgür A, He Y, and Hur J. Identifying Cancer Vaccine Adjuvants in Biomedical Literature Using Large Language Models. The 17<sup>th</sup> Great Lakes Bioinformatics Conference (GLBIO 2025). May 12-15, 2025. Minneapolis, MN. (To be presented by **Rehana**)
171. Huang F, Hu D, Guan R, Quan H, McGregor B, Hur J, Zhang J, and Guo K. scGEN: Adaptive Weighting Strategy for Challenging Cell Clustering in Single-cell RNA-seq. The 17<sup>th</sup> Great Lakes Bioinformatics Conference (GLBIO 2025). May 12-15, 2025. Minneapolis, MN. (To be presented by **Huang**)